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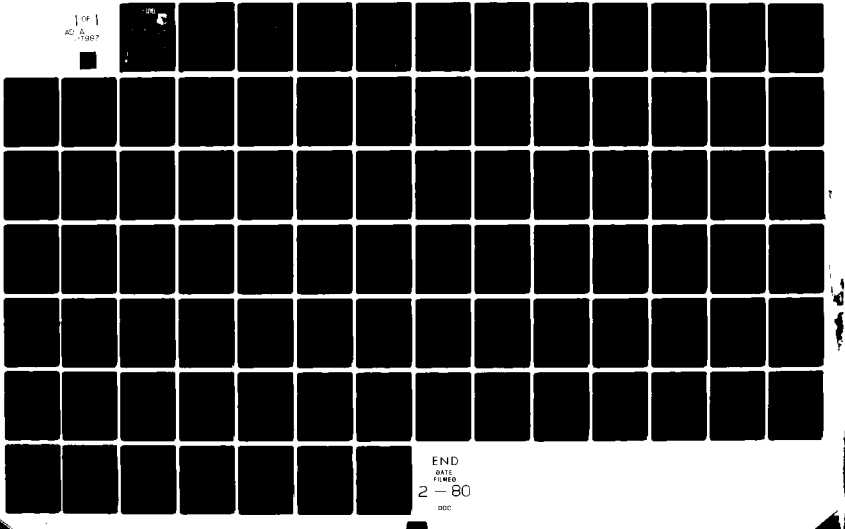

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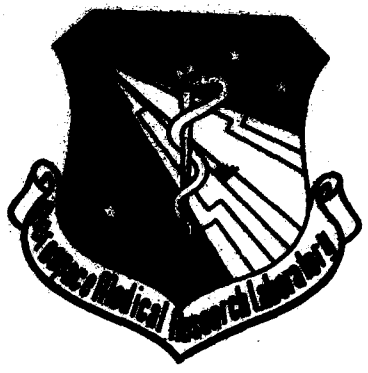

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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 133
F-15 Aircraft in the AF32A-23 Noise Suppressor, Near and Far-Field Noise

JULY 1979

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AEROSPACE MEDICAL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

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FOR THE COMMANDER

HENNING E. VON GIERKE
Director
Biodynamics and Bioengineering Division
Aerospace Medical Research Laboratory

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The AF32A-23 noise suppressor is made by the Jetway Equipment Corporation for acoustical suppression of the F-15 aircraft. This report provides measured and extrapolated data defining the bioacoustic environments produced by this aircraft operating in this suppressor for four engine power configurations. Near-field data are reported for locations in a wide variety of physical and psychoacoustic measures: overall and band sound

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pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 16 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 723107, Technology to Define and Assess Environmental Quality of Noise From Air Force Operations.

The author gratefully acknowledges Mr. John Cole and Mr. Robert Powell for their assistance in preparing this report, Mr. Jerry Speakman and Capt Richard Gorman for their assistance in acquiring the raw data, Mr. Keith Kettler, Mr. Henry Mohlman and Mr. Fred Lampley of the University of Dayton for assistance in the mechanics of data processing, and Mrs. Peggy Massie for assistance in typing this report.

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Table of Contents

List of Tables

List of Figures

INTRODUCTION

The F-15A aircraft is a single-place, land-based, high-performance, air-superiority fighter powered by two Pratt and Whitney F100-PW-100 engines. The aircraft is manufactured by McDonnell-Douglas Corporation and code named the Eagle. The AF32A-23 noise suppressor was built by the Jetway Equipment Corporation to provide noise level reduction for all F-15 aircraft during ground runup operations.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft in this suppressor system during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the F-15 aircraft operating in the AF32A-23 noise suppressor.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for standard meteorological conditions (15°C temperature, 70% rel humidity, 0.760 meters Hg barometric pressure), to derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

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1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 1: Organization, Content and Application,* AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.

2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise,* AMRL-TR-75-50 (2), AMRL, WPAFB, OH 1975.

NEAR-FIELD NOISE

MEASUREMENTS

AMRL acquired near-field noise data on the AF32A-23 noise suppressor system during ground runup operations of the F-15 aircraft. For these tests the aircraft was located in the AF32A-23 noise suppressor at Nellis AFB with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and the four-engine power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand-held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all the noise samples on magnetic tape. During analysis of each sample, he determined the one-third octave band root-mean-square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location. Figure 1 shows the four near-field locations where ground crew are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations are difficult in the near-field since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the measurement locations and test conditions. For example, the designator 1/A means ground crew location 1 and test condition A.

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the F-15 aircraft in the AF32A-23 noise suppressor at the four ground crew locations. This table includes the overall, 1/3-octave band, and octave band levels. From these data one can calculate the variety of measures given in Table 3, which are widely used to assess the effects of noise on personnel and their performance.

All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

TABLE 1

MEASUREMENT LOCATIONS AND TEST CONDITIONS FOR NEAR-FIELD NOISE MEASUREMENTS

F-15 Aircraft In The AF32A-23 Noise Suppressor, Nellis AFB NV, 17 March 79
Tail #076-079

Ground Crew Location	
1	Leak Check Position
2	Trim Check Position
3	Ground Crew Observer Position
4	Fire Truck Position
Aircraft Operation [Single Engine]	
A	Idle Power (65% RPM)
B	80% RPM
C	Military Power (91% RPM)
D	Max Afterburner Power
Meteorology	
Temperature	12 C
Bar Pressure	.708 M Hg
Rel Humidity	47 %
Wind — Speed	2 M/Sec (4 KTS)
— Direction	260 Deg

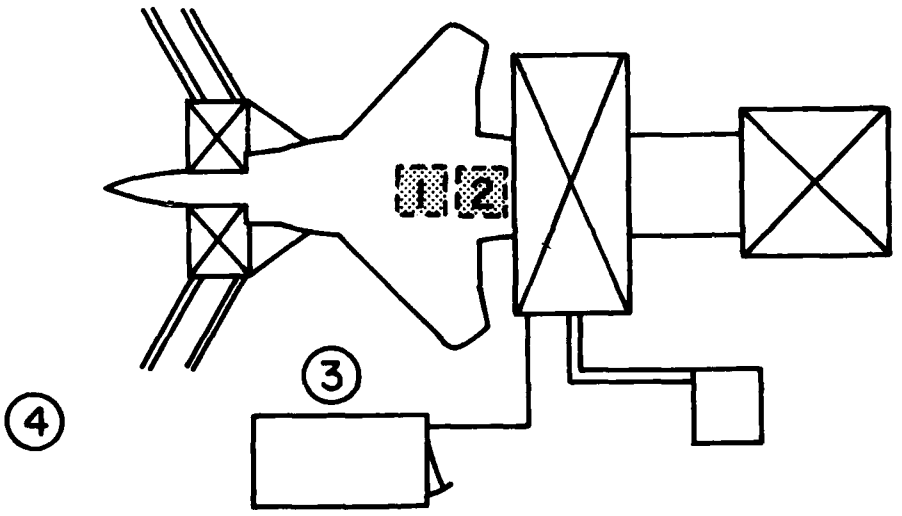


Figure 1. Near-Field Measurement Locations at Nellis AFB NV

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired both nea. and far-field data during a 1- 2-hour test period, thus keeping similar meteorological conditions. Figure 2 shows the ground runup pad, ground cover, aircraft orientation and the 16 microphone measurement sites on a semicircle. The center of the 100 meter radius semicircle used in surveying the AF32A-23 suppressor was on the ground directly below the center of the exhaust stack.

Table 4 provides cockpit readouts of engine characteristics (% RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

All microphone measurement sites are in the acoustic far-field of their source where the sound wave-fronts spherically diverge and the noise source may be regarded as a point source.

A portable microphone/tape-recorder system was used to sequentially record the noise at each far-field location. The microphone was attached to a hand held pole, pointed at the source (0° angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

RESULTS

Table 5 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15°C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 3 which provides a compact summary of the far-field noise characteristics of the F-15 aircraft operating in the AF32A-23 noise suppressor in a standard format.

Estimates of the noise levels for intermediate power settings (e.g., 90% RPM) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.

Figures 4 through 10 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

Data excessively influenced by spurious background/electronic noise were eliminated from all figures and tables. No data were taken at angles of 70°, 80° and 90° due to blockage of the noise by the F-5 suppressor that was located between the measurement points and the F-15 suppressor. The noise data taken at 60° and 100° were significantly reduced due to partial screening of this "barrier" therefore suppressor data for angles 60° to 100° have been interpolated from the data at 50° and 110° using a linear interpolation for each 1/3 octave band at the reference distance.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were too low.

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.

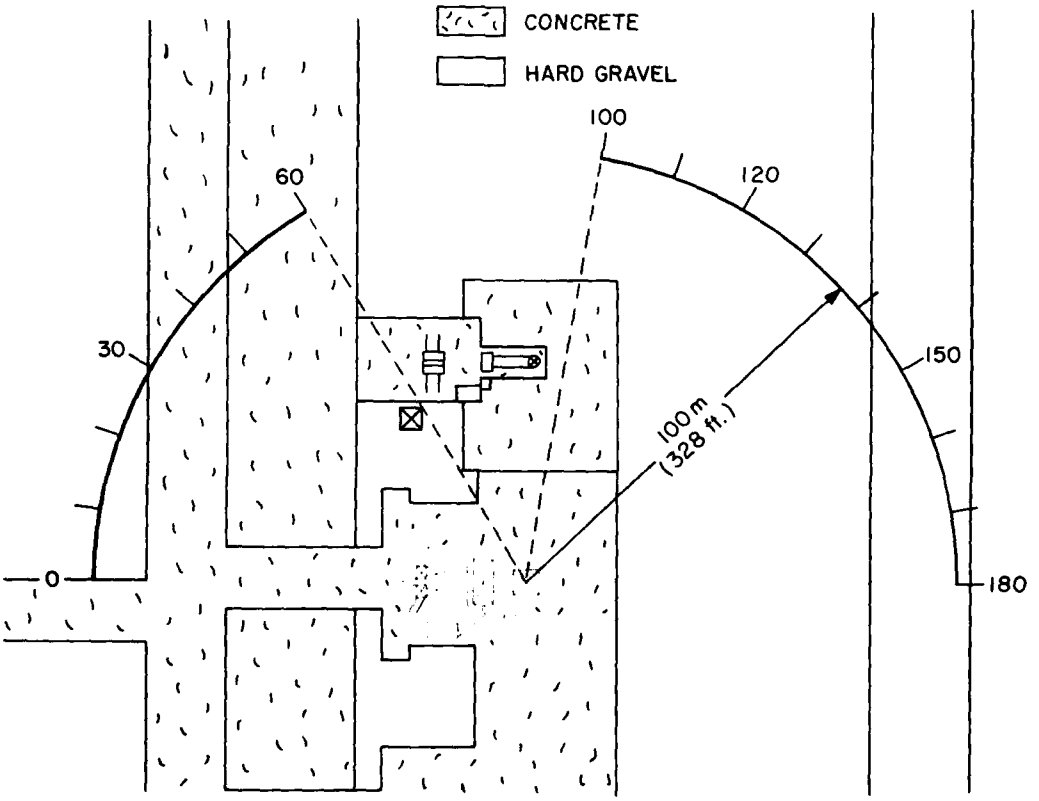


Figure 2. Far-Field Measurement Locations at Nellis AFB NV

TABLE: 2 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND

IDENTIFICATION:
OMEGA 3.2
TEST 79-761-001
RUN 01
06 APR 79
PAGE F1

NOISE SOURCE/SUBJECT:
F-15 AIRCRAFT IN THE
AF32A-23 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
A= IDLE PWR (65% RPM)
B= 80% RPM
C= MILITARY PWR (91% RPM)
D= A/B PWR SINGLE ENGINE

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	4/A	1/B	2/B	3/B	4/B	1/C	2/C	1/D	2/D	4/D
25	94	92	78	79	101	99	87	87	102	101	111	112	100
31.5	84	84	78	71	94	92	87	85	97	96	107	106	98
40	85	83	75	70	97	93	88	82	98	96	108	107	96
50	84	82	74	70	99	95	91	83	100	99	112	110	96
63	79	81	74	68	94	91	88	82	95	94	103	101	94
80	80	79	74	68	96	92	87	81	97	96	105	105	92
100	88	82	76	72	98	92	88	82	97	95	107	104	92
125	88	88	80	74	101	97	92	89	103	101	111	109	97
160	91	89	78	74	104	96	93	87	107	99	113	106	97
200	89	85	75	70	108	100	92	88	111	105	116	108	98
250	89	84	78	70	108	99	93	86	115	106	119	110	98
315	89	87	76	68	108	102	93	86	116	111	119	112	97
400	95	93	80	72	107	101	91	86	117	112	119	116	98
500	90	88	78	71	108	102	91	85	117	114	121	119	99
630	88	85	77	66	110	103	91	85	118	115	123	119	98
800	90	90	81	68	108	102	91	85	118	114	123	119	99
1000	90	88	79	68	109	104	93	83	118	113	122	118	99
1250	90	87	79	69	108	103	92	82	115	111	120	116	97
1600	90	88	80	70	109	104	94	84	115	111	120	116	98
2000	90	88	79	68	108	104	94	85	113	110	118	115	97
2500	102	99	93	82	110	105	95	86	112	110	118	114	97
3150	95	93	87	75	110	106	95	86	111	108	118	113	95
4000	96	94	87	78	113	107	98	88	112	109	118	114	94
5000	92	91	85	75	113	108	98	87	111	108	117	113	92
6300	88	87	79	69	112	107	96	85	110	107	116	111	90
8000	88	86	78	68	112	107	95	82	109	105	116	110	87
10000	88	87	76	63	116	107	96	82	108	104	116	109	85
OVERALL	106	104	97	87	123	117	107	100	127	123	132	128	111

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2 MEASURED SOUND PRESSURE LEVEL (DB) OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 AIRCRAFT IN THE
AF32A-23 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
A= IDLE PWR (65% RPM)
B= 80% RPM
C= MILITARY PWR (91% RPM)
D= A/B PWR SINGLE ENGINE

IDENTIFICATION:
OMEGA 3.2
TEST 79-761-001
RUN 01
06 APR 79
PAGE J1

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	4/A	1/B	2/B	3/B	4/B	1/C	2/C	1/D	2/D	4/D
31.5	95	93	82	80	103	100	92	90	104	103	114	114	103
63	86	86	79	73	101	98	94	87	103	102	113	111	99
125	94	92	83	78	106	100	96	91	109	104	115	111	101
250	94	90	81	74	113	105	97	92	119	113	123	115	102
500	97	94	83	75	113	107	95	90	122	118	126	122	103
1000	95	93	84	73	113	108	97	88	122	117	126	122	103
2000	102	100	94	82	114	109	99	90	118	115	123	120	102
4000	99	97	91	81	117	112	102	92	116	113	122	118	99
8000	93	91	82	72	118	112	100	88	114	110	120	115	92
OVERALL	106	104	97	87	123	117	107	100	127	123	132	128	111

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

NOISE SOURCE/SUBJECT:
F-15 AIRCRAFT IN THE
AF32A-23 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
A= IDLE PWR (65% RPM)
B= 80% RPM
C= MILITARY PWR (91% RPM)
D= A/B PWR SINGLE ENGINE

IDENTIFICATION:
OMEGA 3.2
TEST 79-761-001
RUN 01
06 APR 79
PAGE H1

	LOCATION/CONDITION												
	1/A	2/A	3/A	4/A	1/B	2/B	3/B	4/B	1/C	2/C	1/D	2/D	4/D
HAZARD/PROTECTION													
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR													
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR													
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)													
NO PROTECTION													
OASLC	106	104	96	87	122	116	107	99	127	123	132	128	110
OASLA	106	104	97	86	122	117	107	97	126	122	131	127	108
T	11	15	50	339	P	P	9	50	P	P	P	P	8
MINIMUM QPL EAR MUFFS													
OASLA*	80	78	70	61	98	91	82	75	102	98	106	102	85
T	960	960	960	960	42	143	679	960	21	42	11	21	404
AMERICAN OPTICAL 1700 EAR MUFFS													
OASLA*	74	72	64	56	93	86	77	70	96	92	101	96	80
T	960	960	960	960	101	339	960	960	60	120	25	60	960
V-51R EAR PLUGS													
OASLA*	77	75	67	57	95	89	78	70	101	97	106	101	83
T	960	960	960	960	71	202	960	960	25	50	11	25	571
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS													
OASLA*	63	61	53	43	82	76	65	56	87	83	92	87	69
T	960	960	960	960	679	960	960	960	285	571	120	285	960
H-133 GROUND COMMUNICATION UNIT													
OASLA*	80	77	71	60	94	89	78	69	98	94	103	99	81
T	960	960	960	960	85	202	960	960	42	85	18	36	807
COMMUNICATION													
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)													
PSIL	98	96	87	77	113	108	97	89	121	117	125	121	103
ANNOYANCE													
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)													
TONE CORRECTION (C IN DB)													
PNLT	124	122	115	104	136	131	121	113	138	135	144	140	121
C	3	3	3	3	0	1	0	1	0	1	0	1	0

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.
P ADDITIONAL EAR PROTECTION REQUIRED.

TABLE 4

TEST CONDITIONS
FOR FAR-FIELD NOISE MEASUREMENTS

F-15 Aircraft In The AF32A-23 Noise Suppressor, Ground Runup
17 March 1979
Nellis AFB NV, Tail #076-079

Aircraft Engine Operation

Idle Power	Both Engines 65 % RPM 470 F, Turbine Inlet Temperature 1100 LBS/HR, Fuel Flow
80% RPM	Both Engines 80 % RPM 650 F, TIT 3900 LBS/HR, FF
Military Power	Both Engines 91 % RPM 930 F, TIT 8600 LBS/HR, FF
Afterburner Power	One Engine 91 % RPM 930 F, TIT 40800 LBS/HR, FF

Meteorology

Temperature	12 C
Bar Pressure	.708 M Hg
Rel Humidity	47 %
Wind — Speed	2 M/Sec (4 KTS)
— Direction	260 Deg

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 2

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .708 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES)																		
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	80	79	77	74	74	67	67	66	66	66	65	65	71	71	72	72	74	74	75
31.5	71	71	67	67	67	66	65	65	65	65	64	64	64	66	67	67	67	68	68
40	67	66	66	65	64	63	63	63	63	63	63	63	62	67	62	63	60	60	60
50	64	63	62	63	64	61	60	59	58	58	57	56	58	64	61	62	58	58	56
63	64	63	62	61	61	61	61	61	62	62	62	62	59	66	60	61	60	58	57
80	66	63	63	62	62	61	60	60	59	59	58	58	57	62	58	60	63	57	56
100	67	64	64	67	63	63	63	62	62	61	61	60	60	60	59	65	62	58	58
125	67	63	66	64	64	61	61	60	59	59	58	57	58	57	60	68	62	57	58
160	70	66	65	66	65	62	61	60	60	59	58	57	56	56	56	65	63	55	54
200	67	64	63	60	60	58	58	58	57	57	56	56	55	56	57	61	61	56	53
250	67	64	63	63	62	62	60	59	58	57	56	55	56	56	55	55	62	57	55
315	67	63	62	60	60	60	59	58	57	56	55	54	54	52	52	53	61	52	48
400	70	68	67	67	71	69	67	65	63	61	59	57	56	56	52	56	62	53	49
500	64	67	65	64	61	65	64	62	61	60	58	57	58	58	55	56	60	49	52
630	59	59	60	59	58	55	54	53	52	50	49	48	50	47	47	45	57	45	47
800	61	61	63	62	63	62	61	60	59	58	57	56	52	53	52	49	56	44	41
1000	61	58	61	63	68	64	62	60	58	56	54	52	52	54	52	49	51	41	43
1250	58	57	58	61	59	59	57	56	55	54	52	51	54	50	52	49	46	42	43
1600	58	58	59	59	57	55	55	54	54	54	53	53	54	52	52	49	44	43	42
2000	56	57	59	57	57	55	54	53	53	52	51	50	52	50	51	47	41	39	39
2500	71	71	73	71	71	71	70	69	69	68	67	66	68	68	69	63	57	53	52
3150	67	67	67	65	65	65	64	63	63	62	62	61	63	62	64	57	51	49	47
4000	65	66	66	64	64	63	62	62	61	61	60	60	62	59	62	56	50	46	45
5000	61	62	61	59	59	58	58	58	57	57	56	56	59	55	58	52	47	42	41
6300	55	56	55	53	53	51	51	50	50	49	48	48	51	47	49	42	39	34	33
8000	50	52	51	49	48	46	46	46	45	45	44	44	46	43	44	37	34	30	29
10000	42	45	44	42	40	39	38	37	37	36	35	34	36	33	34	29	26	25	25
OVERALL	83	82	81	79	80	78	77	76	75	75	74	73	75	76	76	76	77	76	76

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 2

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-25 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .708 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	84	83	82	79	78	78	78	78	78	78	78	78	78	77	79	80	80	79	80
31.5	76	76	75	75	76	76	75	75	75	75	74	74	73	73	75	75	76	73	75
40	75	74	77	77	75	75	75	74	74	73	73	72	71	74	74	76	75	77	76
50	76	75	78	76	75	74	73	73	72	71	71	70	72	73	74	73	74	77	77
63	77	77	78	76	76	73	72	72	72	72	72	72	71	71	73	74	75	75	75
80	74	75	75	77	76	75	74	74	74	74	73	73	73	72	74	75	75	75	74
100	75	75	76	76	75	75	74	74	73	73	72	72	73	72	73	75	73	74	75
125	78	78	81	81	80	79	78	77	76	75	74	73	74	74	76	74	73	75	75
160	75	79	78	78	77	75	74	74	73	72	71	71	71	72	73	70	71	71	72
200	76	77	78	76	76	76	75	74	73	73	72	71	70	70	68	68	67	68	70
250	74	76	78	76	76	75	74	74	73	73	72	72	72	69	67	65	63	63	66
315	72	73	74	76	75	73	72	71	70	69	68	67	67	65	64	62	59	58	59
400	74	72	75	74	74	74	72	70	69	67	66	64	65	63	61	59	56	54	55
500	71	71	74	73	73	73	71	70	69	68	66	65	64	62	60	59	56	54	53
630	71	71	74	75	73	73	72	70	69	67	66	64	63	63	61	59	57	53	52
800	69	70	73	74	72	71	70	69	67	66	65	64	62	63	62	59	57	55	52
1000	68	69	72	73	72	70	69	68	66	65	64	63	61	61	61	59	57	54	52
1250	69	69	73	71	71	69	68	67	66	65	64	63	61	62	61	58	56	55	51
1600	67	69	72	72	70	68	67	66	65	64	63	62	61	61	60	57	55	53	51
2000	66	68	72	72	70	68	67	66	65	64	62	61	59	60	58	56	53	51	50
2500	65	67	71	70	70	69	68	66	65	63	62	60	58	58	57	54	51	49	48
3150	65	67	72	70	70	69	68	66	65	63	62	60	57	56	56	54	51	49	48
4000	64	67	73	70	71	69	68	66	65	63	62	60	57	57	56	54	50	48	46
5000	61	66	71	69	68	68	67	65	64	62	61	59	56	55	55	54	49	46	43
6300	58	63	67	65	65	64	62	61	59	58	56	55	51	50	49	48	43	41	38
8000	53	57	63	61	60	60	58	57	55	53	51	50	45	45	44	42	38	36	34
10000	47	52	58	55	54	54	52	50	48	46	44	42	38	37	37	35	33	31	31
OVERALL	88	89	90	89	88	88	87	86	85	85	84	84	84	84	85	85	85	85	86

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 5 MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 2

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPPESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .708 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	88	91	89	89	88	86	85	85	84	84	83	83	85	86	85	87	87	88	88
31.5	86	86	84	84	86	84	84	83	83	82	82	81	82	84	83	84	84	84	86
40	83	82	83	85	85	85	84	84	83	83	82	82	81	83	83	83	84	84	83
50	82	83	83	83	81	80	79	79	78	78	78	77	78	79	80	80	82	82	85
63	84	84	84	81	80	78	78	78	77	77	77	77	77	76	78	80	81	81	82
80	79	79	80	81	80	79	79	78	78	77	77	76	76	77	78	81	80	82	83
100	78	80	80	79	79	78	78	78	78	78	78	78	79	77	77	79	80	82	81
125	83	86	84	83	84	83	83	82	81	81	80	80	83	81	82	80	81	81	82
160	83	86	83	83	84	83	83	82	82	82	82	81	82	80	81	80	80	78	79
200	83	85	84	82	82	84	83	82	81	80	80	79	81	77	79	78	77	77	78
250	82	82	82	83	83	82	81	80	80	79	78	78	79	75	76	76	73	73	77
315	82	82	83	84	83	82	81	81	80	79	78	78	79	74	74	73	71	70	70
400	85	83	85	84	86	84	82	81	79	78	76	75	73	72	70	70	68	66	66
500	84	84	87	85	86	83	82	80	78	77	75	74	74	73	71	71	69	66	67
630	85	85	87	88	87	85	83	81	79	77	75	74	72	73	72	72	70	68	66
800	83	83	85	88	86	84	82	80	78	77	75	73	72	72	72	74	71	69	66
1000	81	82	85	88	86	83	81	79	77	75	73	71	70	69	70	71	69	66	63
1250	81	81	85	85	84	80	78	76	75	73	71	69	69	68	68	68	66	64	63
1600	83	81	86	86	82	80	78	76	74	72	70	68	67	67	67	67	66	64	64
2000	79	82	85	85	83	79	77	75	73	72	70	68	66	66	66	65	64	63	64
2500	78	80	83	83	81	79	77	74	72	70	67	65	63	65	64	63	61	62	62
3150	78	79	84	83	81	79	77	75	72	70	68	66	62	65	63	64	62	63	63
4000	77	79	84	83	82	79	77	74	72	70	68	66	63	64	64	65	63	63	62
5000	74	76	82	80	77	75	73	71	69	67	64	62	60	61	60	61	60	59	59
6300	71	73	79	76	75	72	70	67	65	63	61	58	55	55	55	56	54	55	54
8000	67	69	75	73	70	67	65	62	59	57	54	52	50	52	50	50	49	50	49
10000	62	63	70	68	67	63	60	57	54	51	48	45	45	45	44	45	43	44	43
OVERALL	96	97	98	98	98	96	95	94	93	92	91	91	92	92	92	92	93	93	94

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 2

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 12 C
BAR PRESS = .708 M HG
REL HUMID = 47 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	98	98	95	94	96	95	94	94	93	93	92	92	91	91	92	90	93	91	94
31.5	96	95	92	94	95	95	94	93	93	92	91	91	91	91	91	89	92	92	94
40	93	92	92	92	93	94	93	93	92	91	90	90	90	91	91	93	94	94	94
50	94	92	92	91	91	91	90	89	88	87	86	85	86	90	90	92	93	93	96
63	92	93	93	92	90	88	87	86	86	85	84	84	84	85	87	90	88	88	90
80	88	90	91	93	91	89	88	87	86	85	84	83	84	85	88	90	88	87	87
100	83	86	87	91	87	90	88	87	86	85	84	83	86	85	85	89	87	87	88
125	89	90	89	90	88	89	87	86	85	84	83	82	82	83	83	85	86	85	87
160	88	90	88	90	91	89	88	86	85	84	82	81	81	78	80	85	85	85	88
200	88	89	89	90	88	90	88	87	85	84	82	81	81	78	79	84	84	83	84
250	86	86	87	90	88	86	85	84	82	81	80	79	81	76	75	78	78	77	80
315	85	85	88	89	88	87	85	84	82	81	79	78	81	76	75	78	77	75	77
400	88	86	90	88	90	88	86	84	82	81	79	77	79	77	76	76	77	76	75
500	89	88	91	89	91	89	87	85	83	81	79	77	79	79	77	77	76	76	74
630	87	87	89	92	91	90	87	85	83	80	78	76	78	78	77	77	77	78	75
800	86	86	88	92	91	87	85	83	81	78	76	74	78	78	77	76	77	75	72
1000	84	84	88	89	88	85	83	81	78	76	74	72	75	74	74	74	75	72	70
1250	85	84	88	89	86	83	81	79	77	74	72	70	75	73	72	73	73	71	69
1600	83	84	87	87	85	82	80	78	76	73	71	69	73	73	71	73	74	71	71
2000	81	84	86	86	85	81	79	77	75	73	71	70	73	72	71	72	73	71	71
2500	80	82	85	85	84	80	77	75	72	70	67	65	69	69	68	69	67	66	67
3150	81	81	85	84	84	80	77	74	72	69	66	64	69	70	68	69	68	66	67
4000	79	81	86	84	83	79	77	74	72	70	67	65	68	69	68	69	67	65	65
5000	75	78	84	80	80	76	73	71	68	66	63	61	65	66	64	65	65	62	63
6300	71	75	81	76	76	72	69	66	64	61	58	56	59	60	60	60	61	58	59
8000	67	74	78	72	72	69	65	62	59	56	53	50	52	54	52	53	54	51	52
10000	63	66	73	67	67	63	60	57	55	52	49	46	48	48	48	47	49	46	46
OVERALL	104	103	103	104	104	103	102	101	100	99	98	97	98	98	99	99	101	100	102

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 6

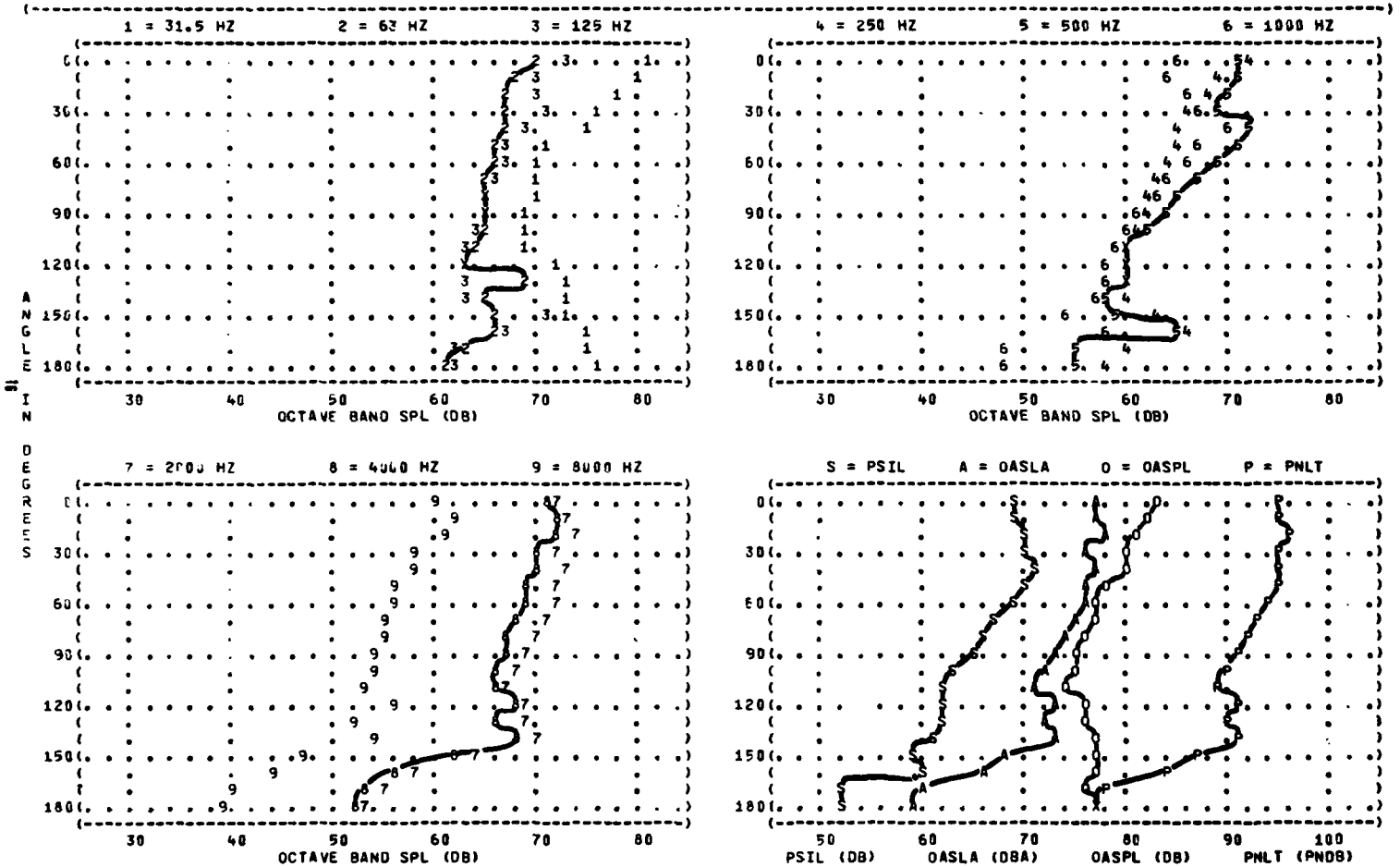


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 6

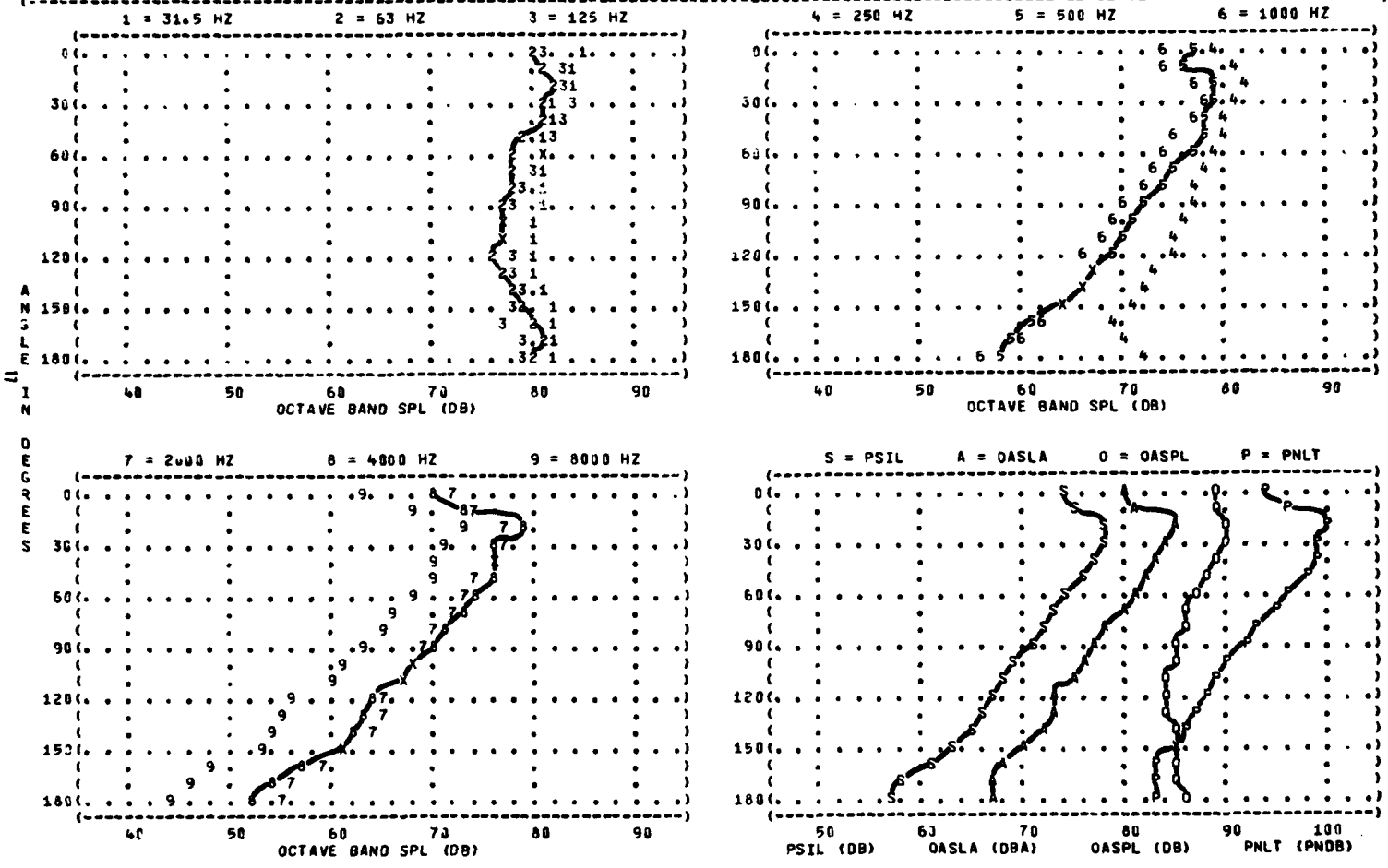


FIGURE: 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 6

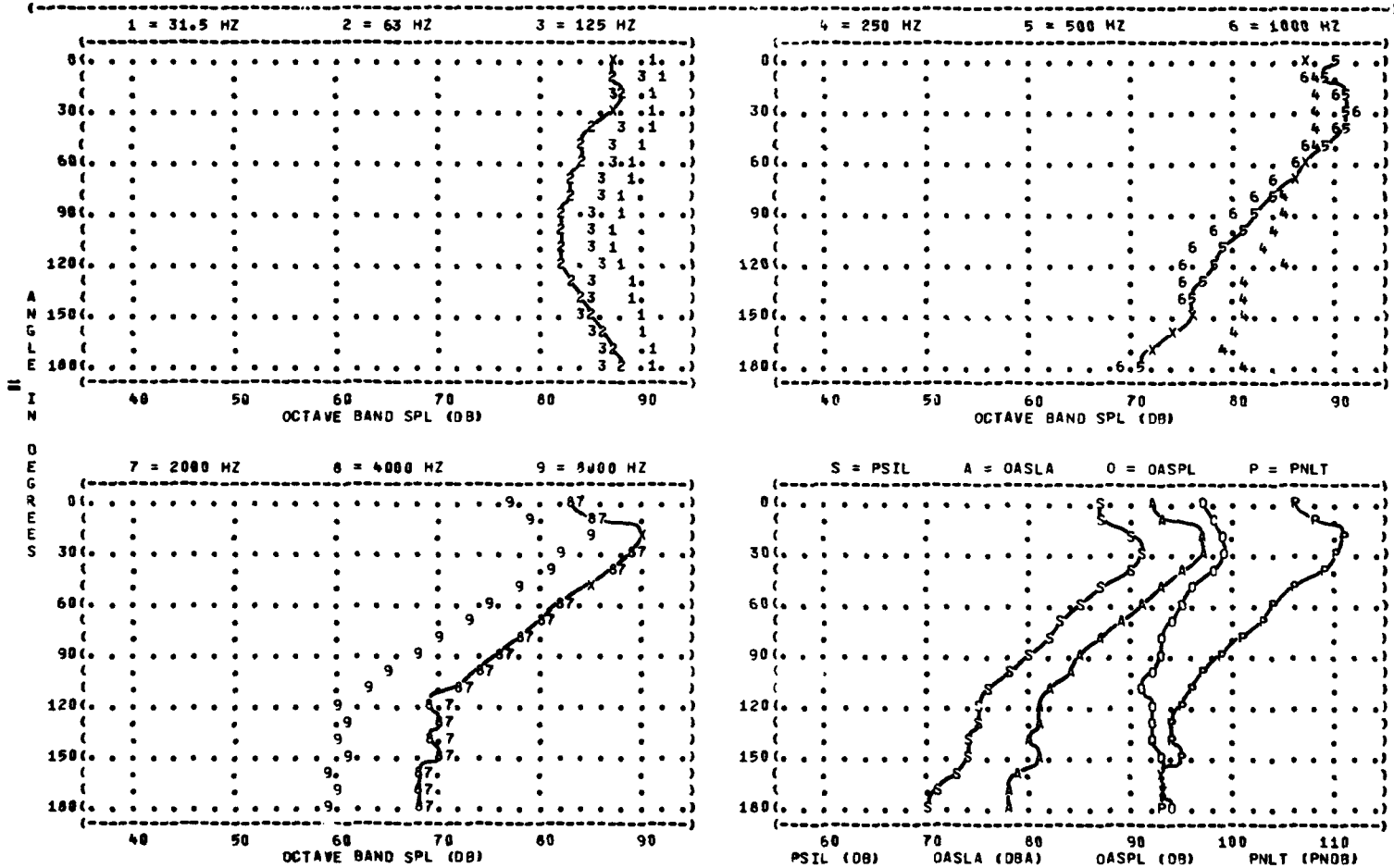


FIGURE: 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-081
RUN 04
22 MAR 79
PAGE 6

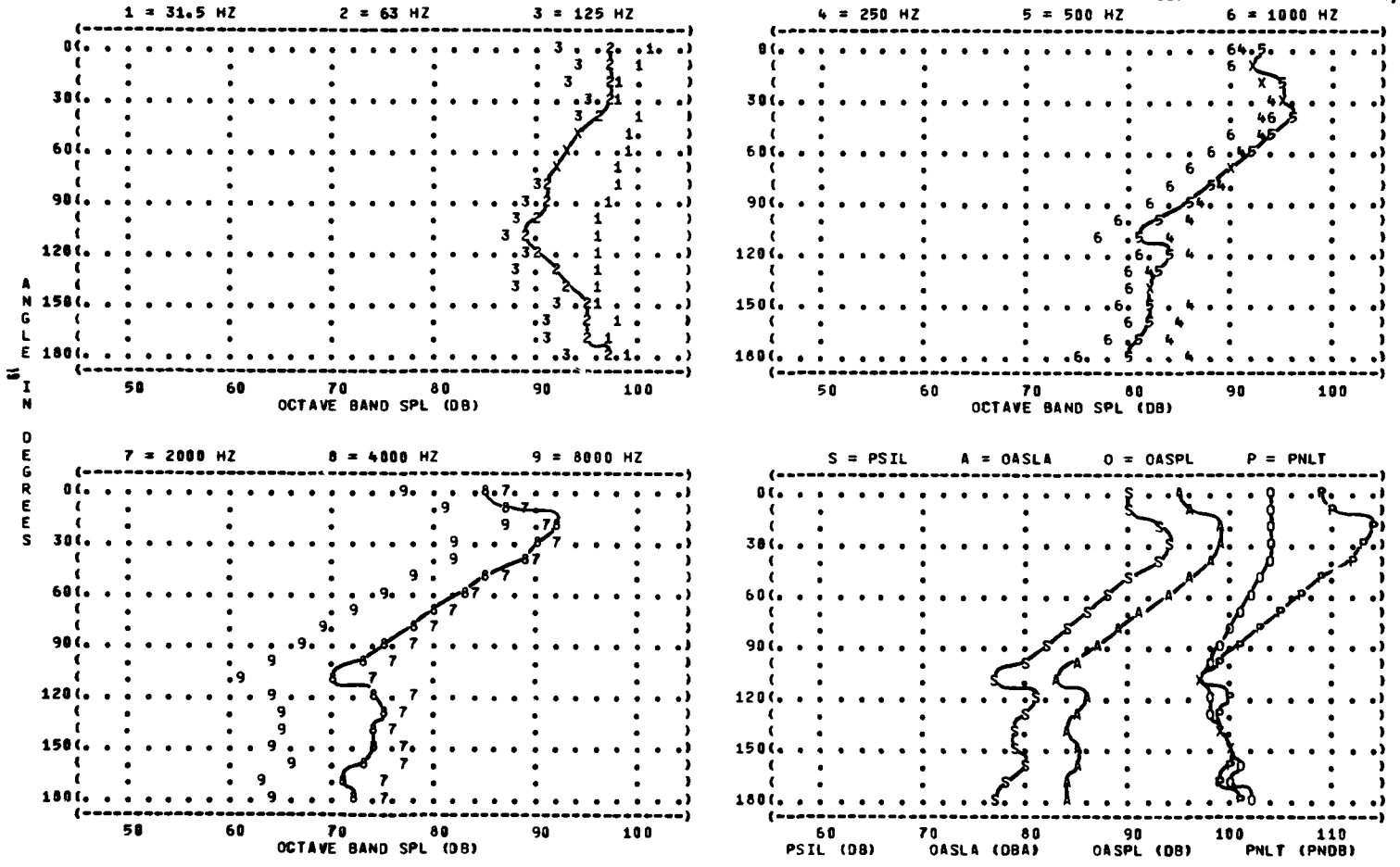


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 13

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAP PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100
L	105

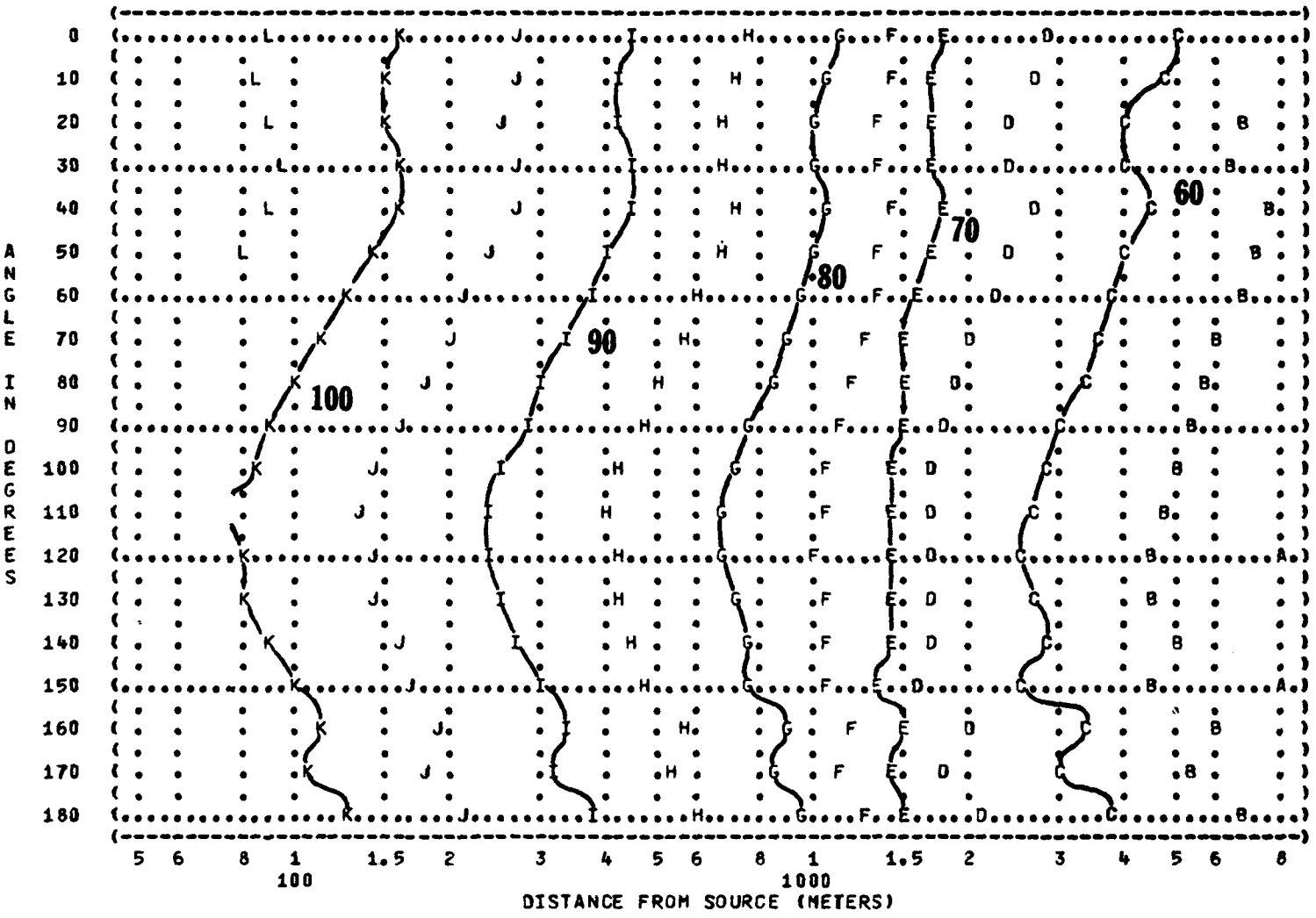


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 13

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

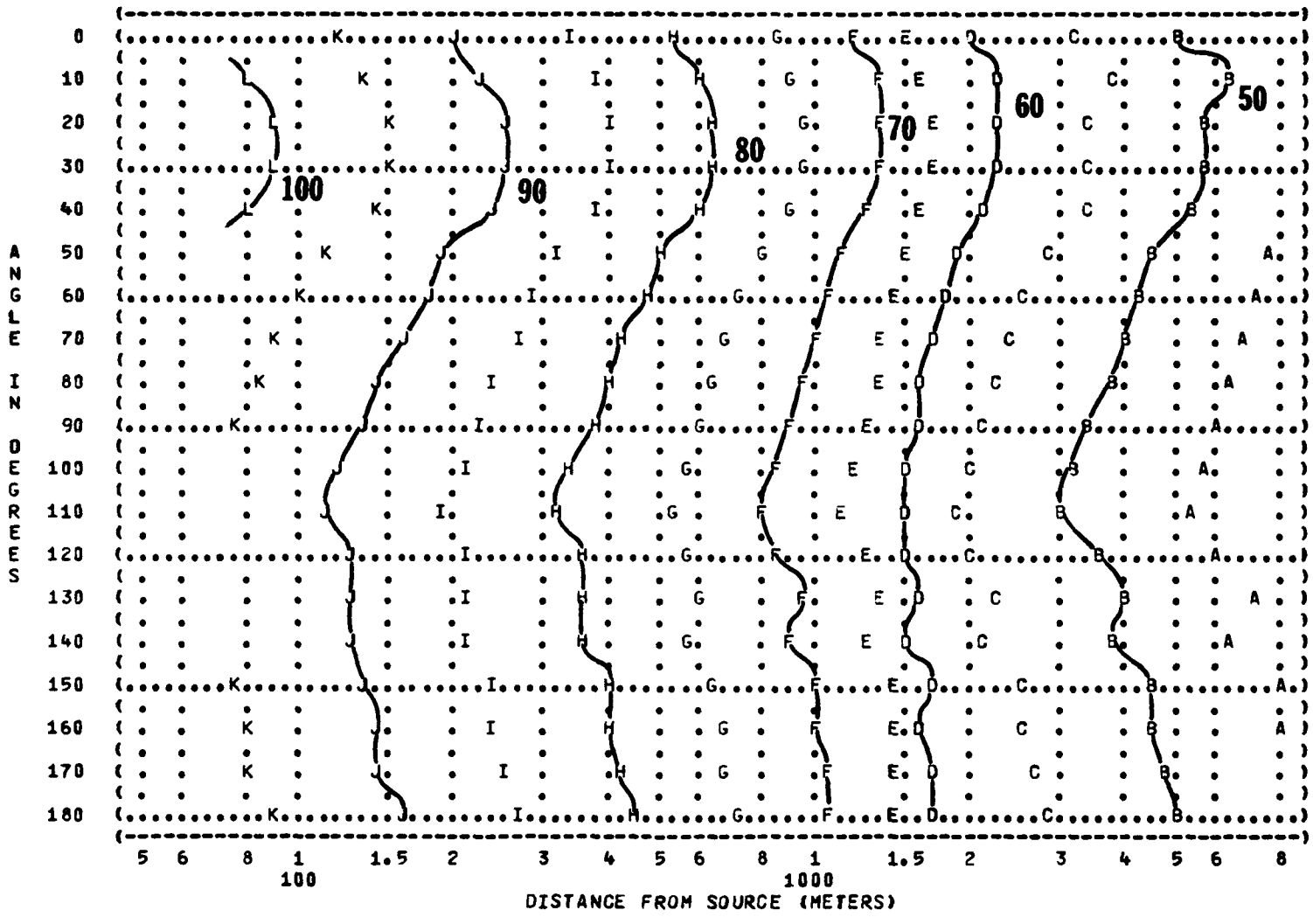


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 13

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

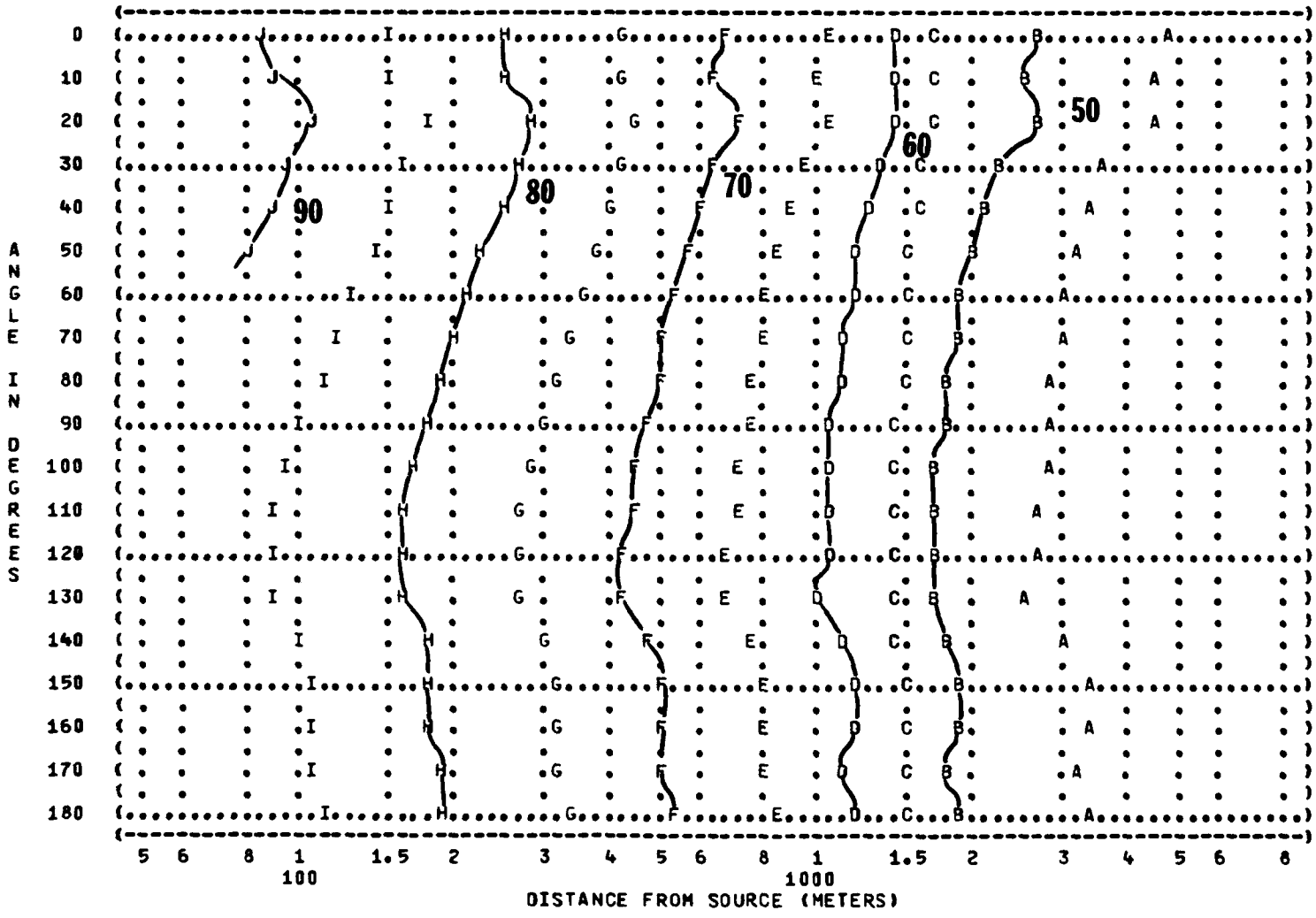


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 13

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85

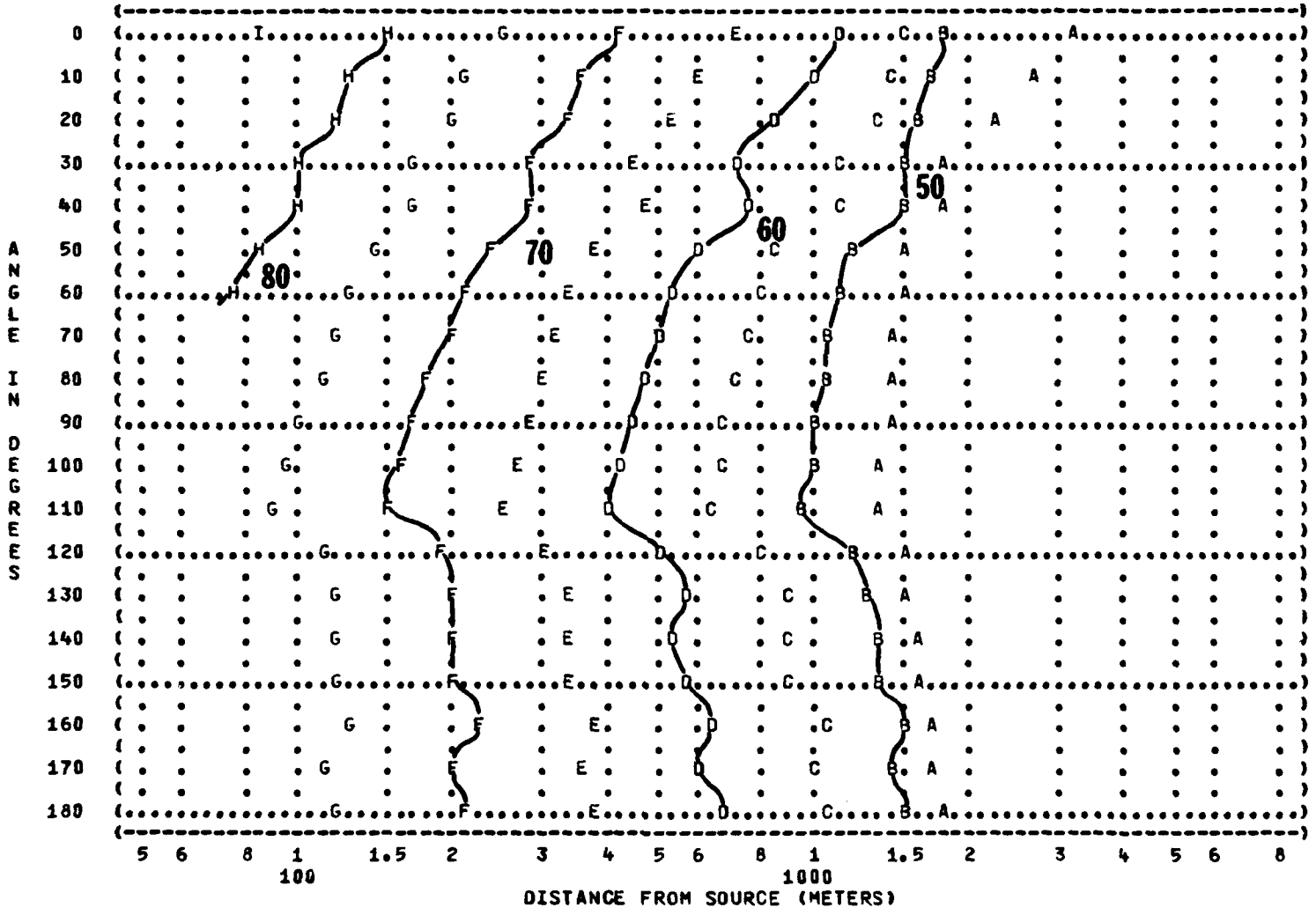


FIGURE 5: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 14

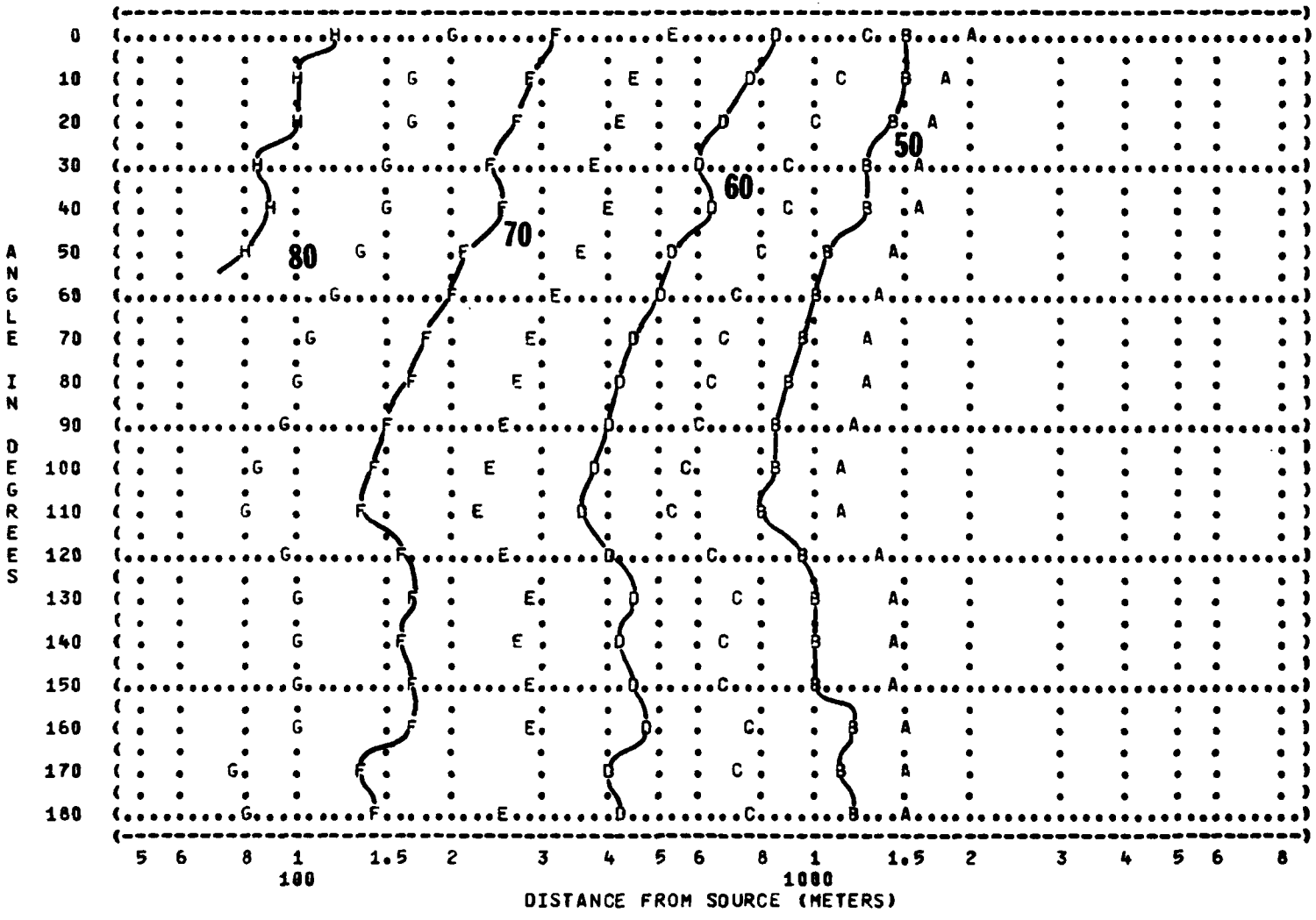


FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 14

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90

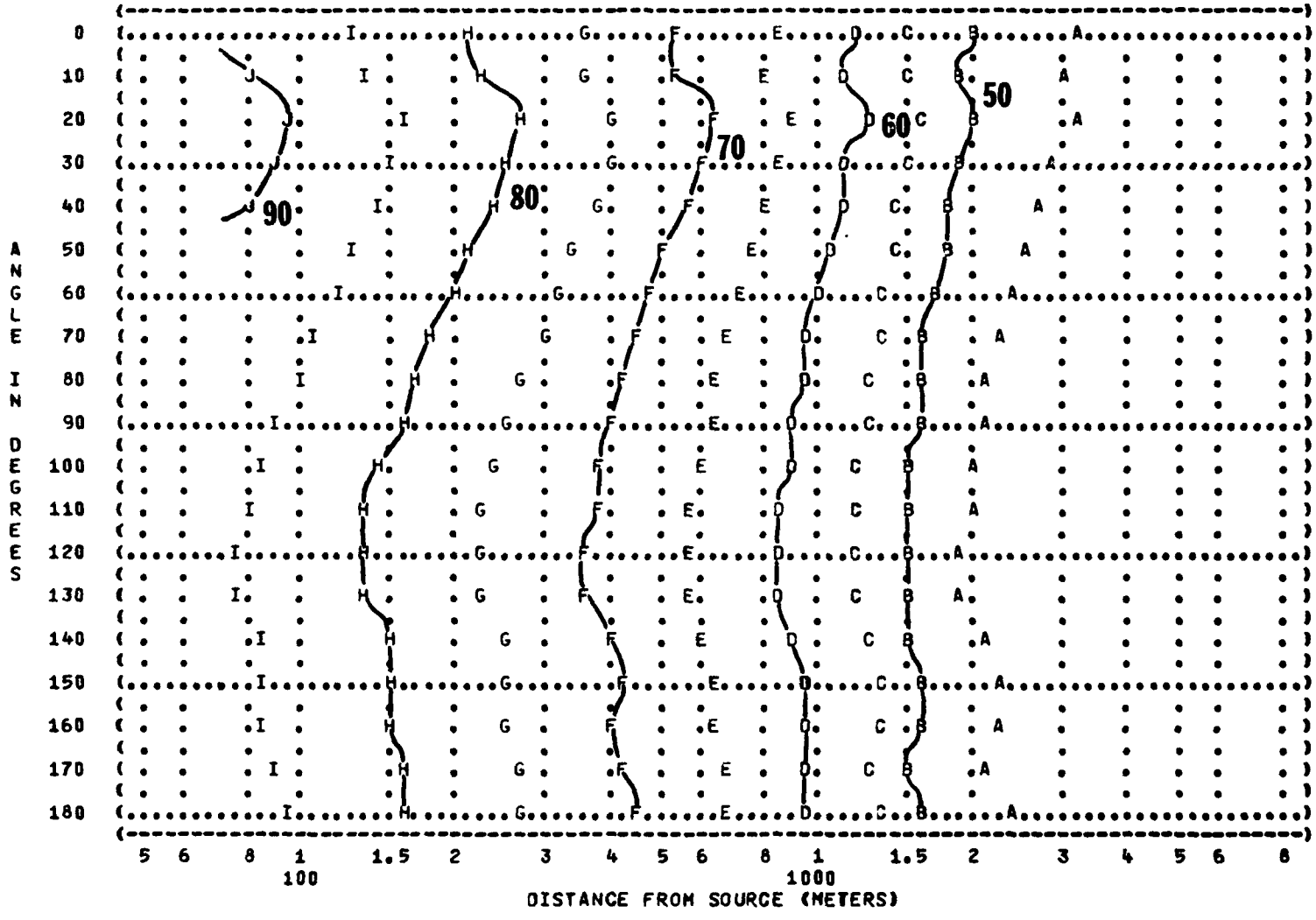


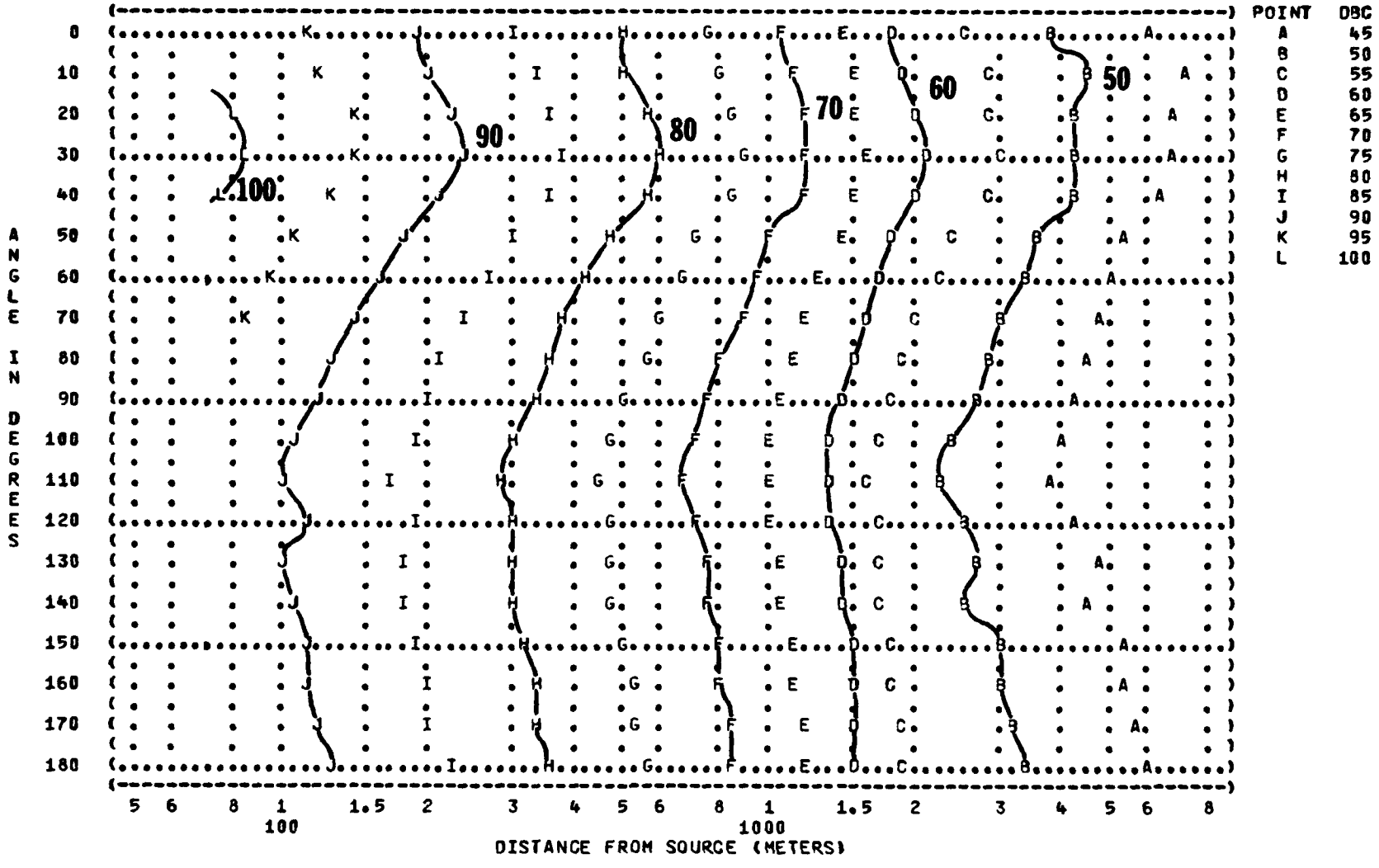
FIGURE 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 14

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100

FIGURE 5: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 14

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBC
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100
L	105

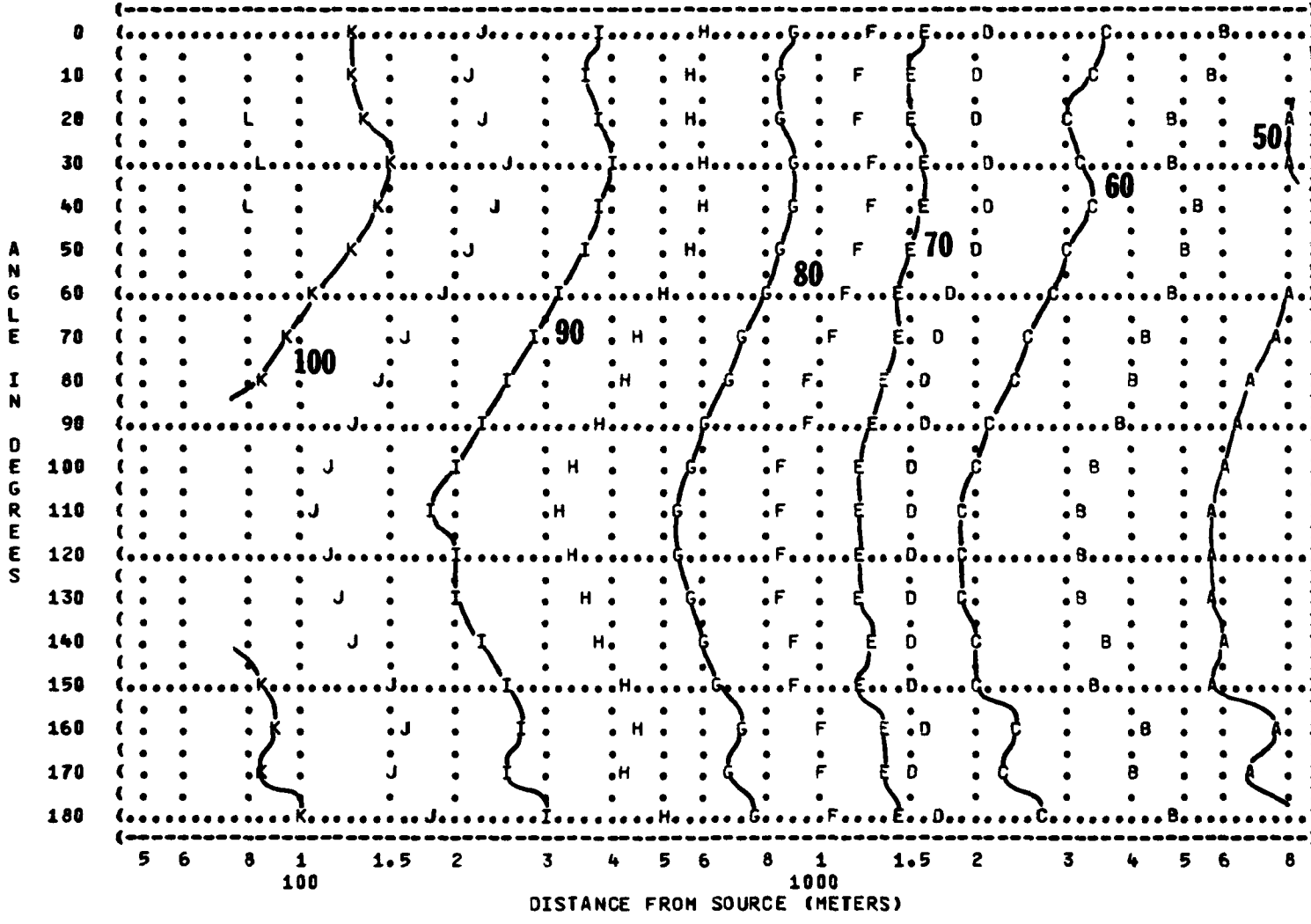


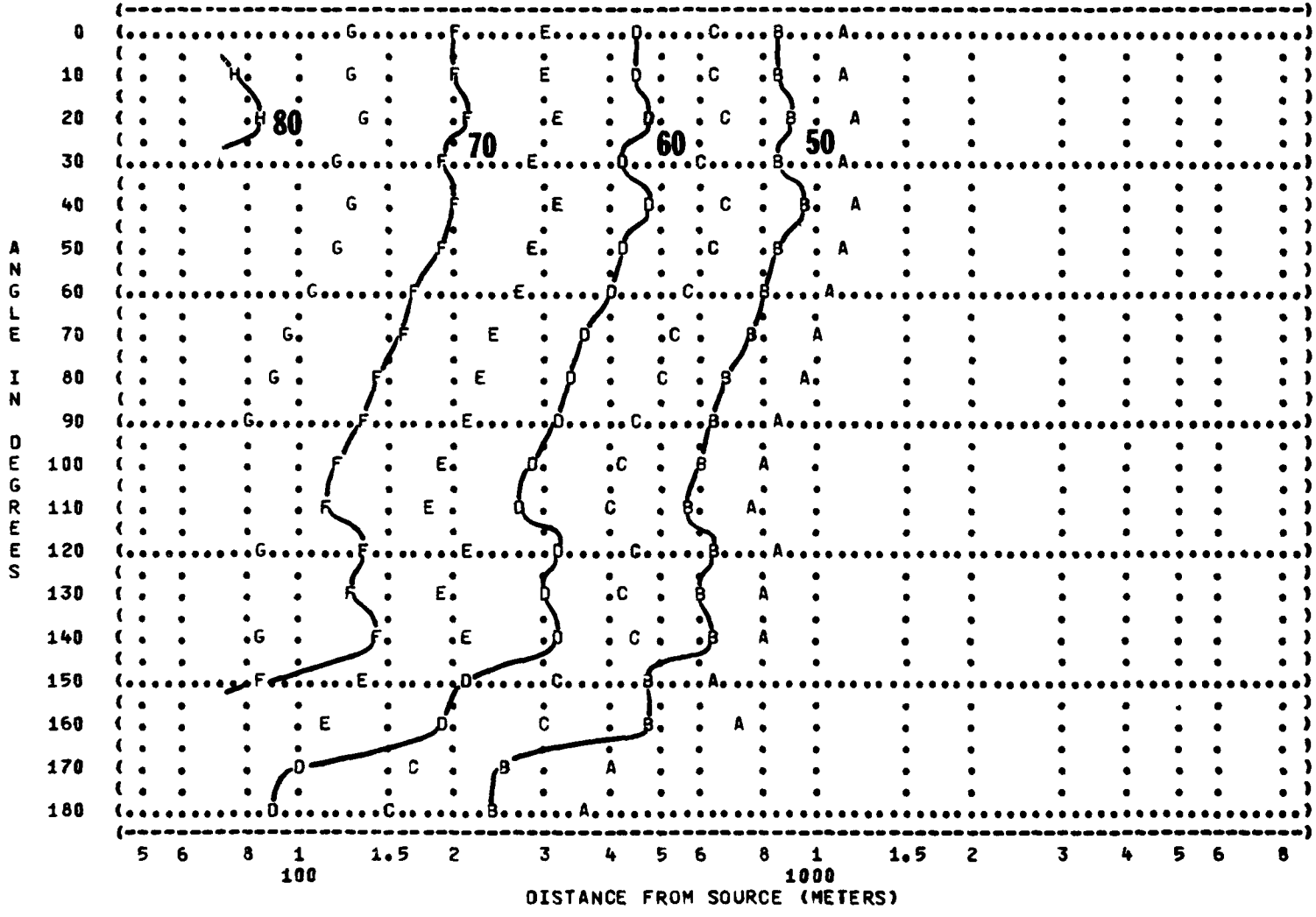
FIGURE: 6 A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 15



POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80

FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 15

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85

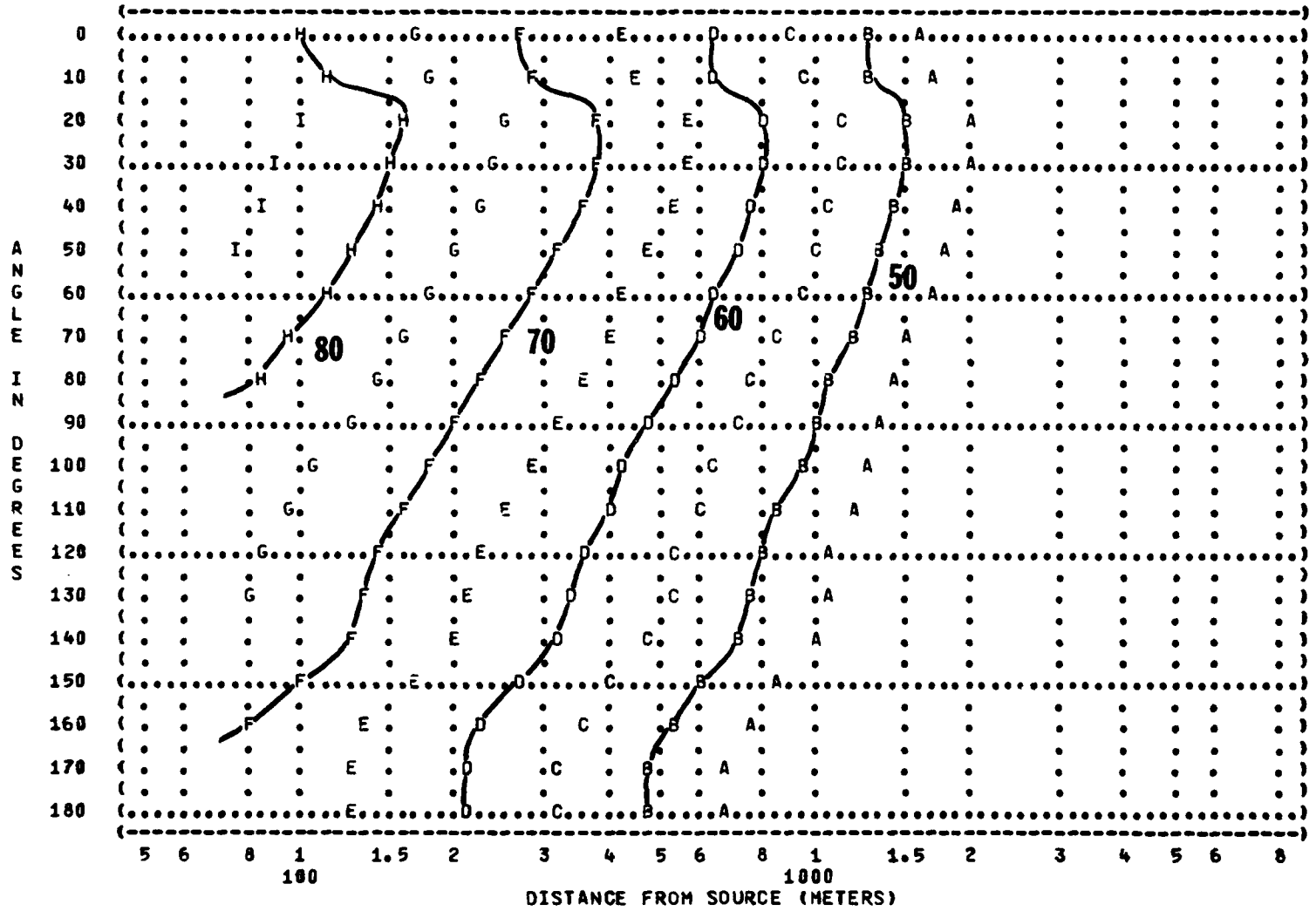


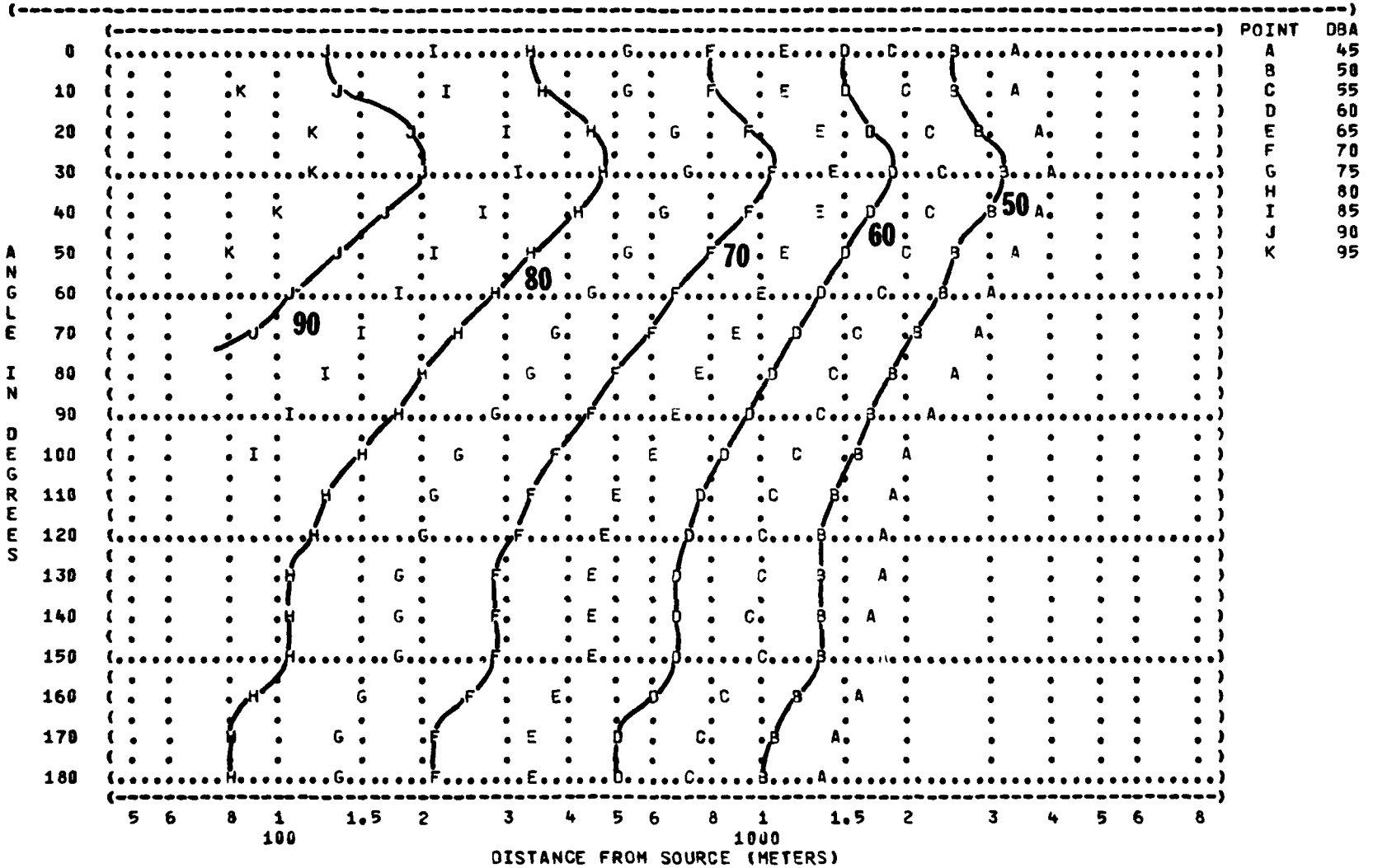
FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 15



POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 15

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100

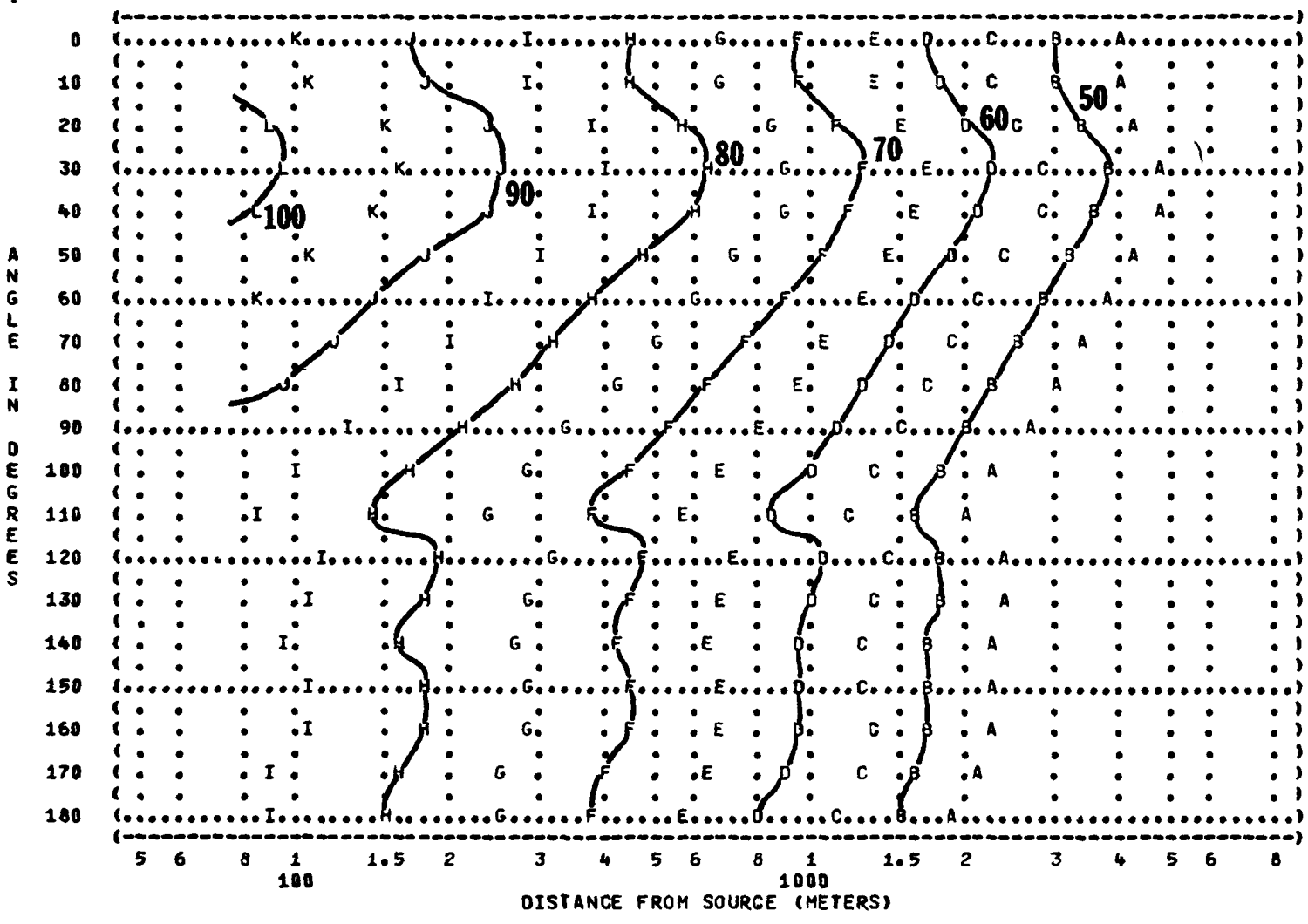


FIGURE 7: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 16

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

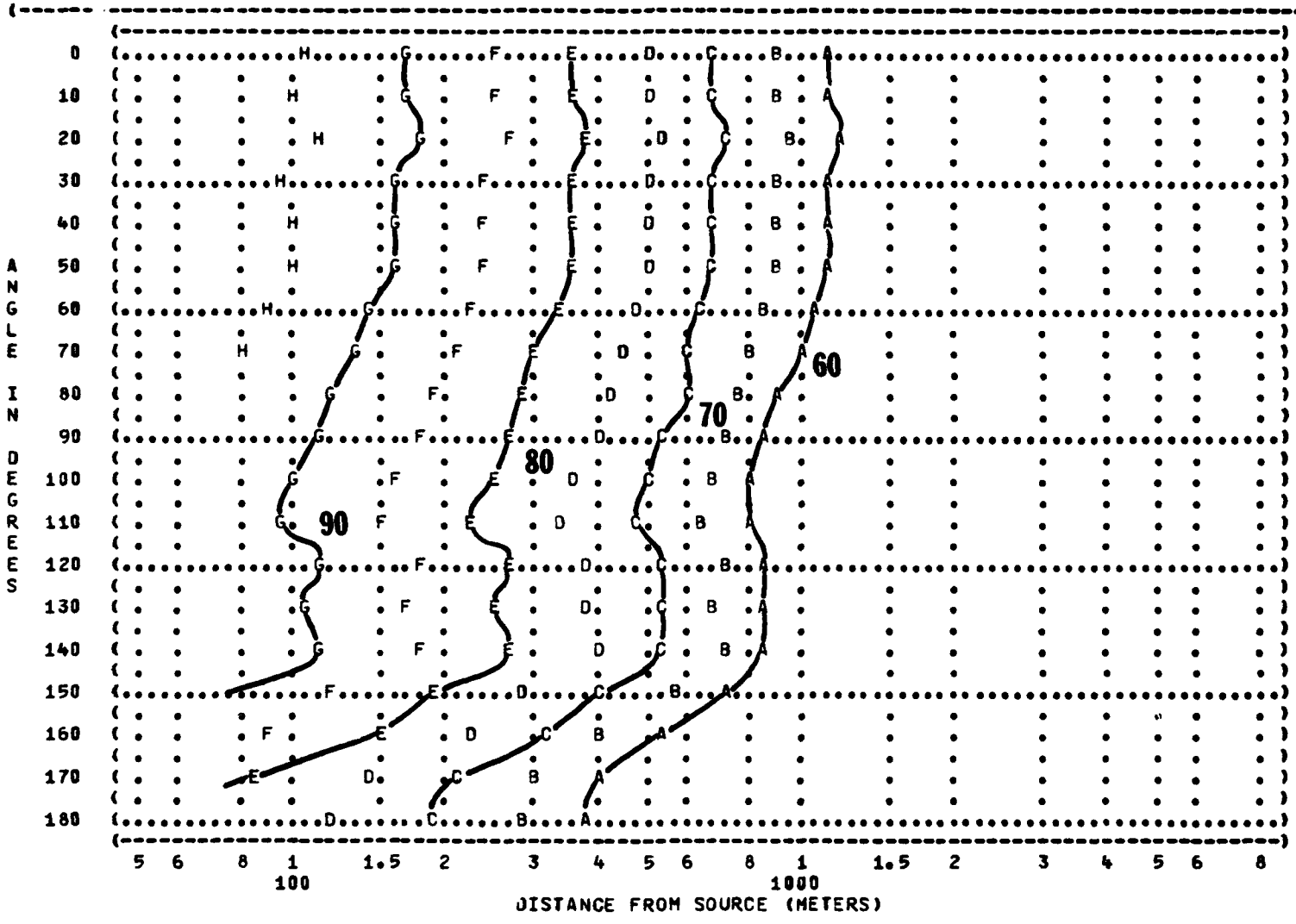


FIGURE 7: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 16

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100

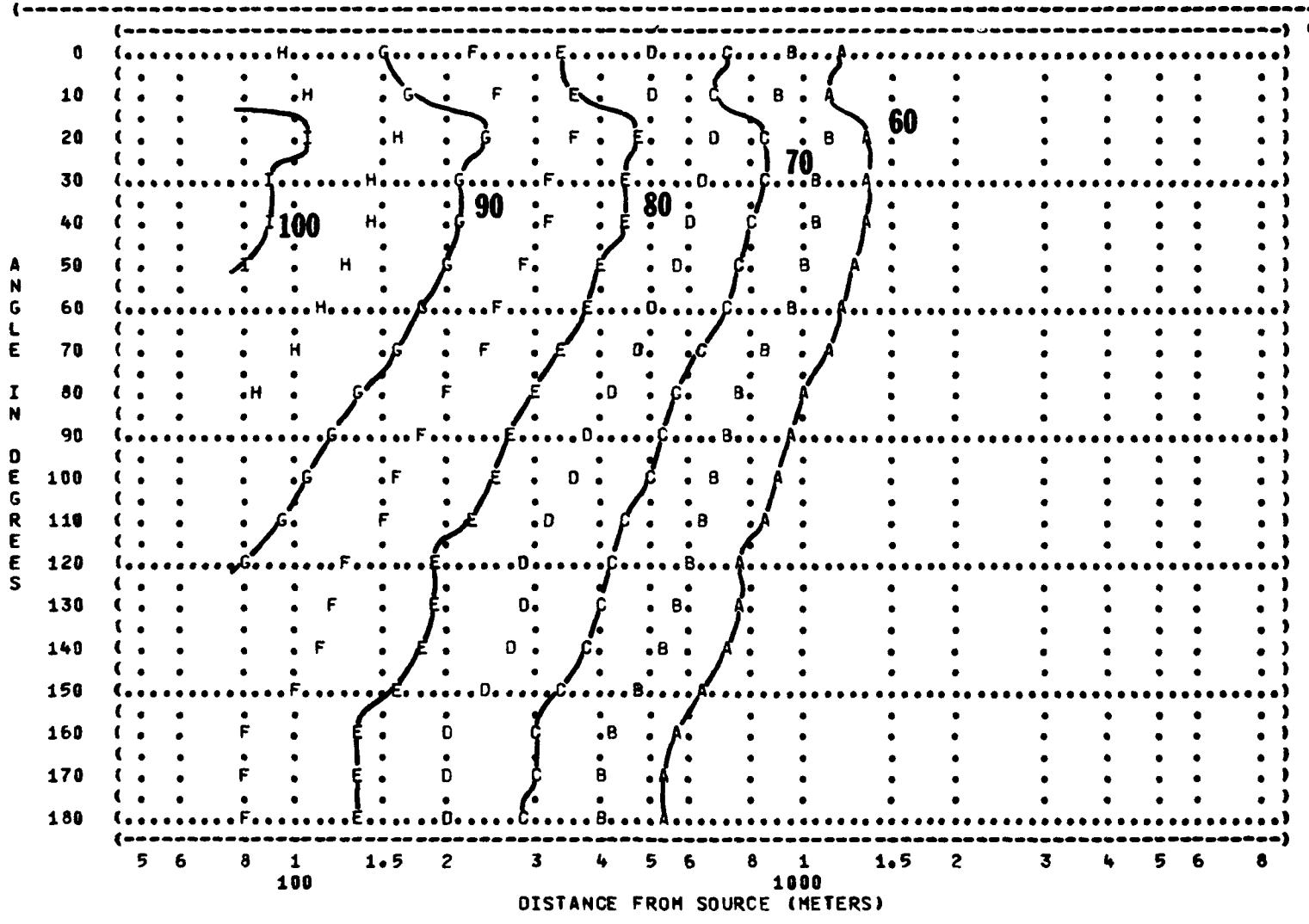


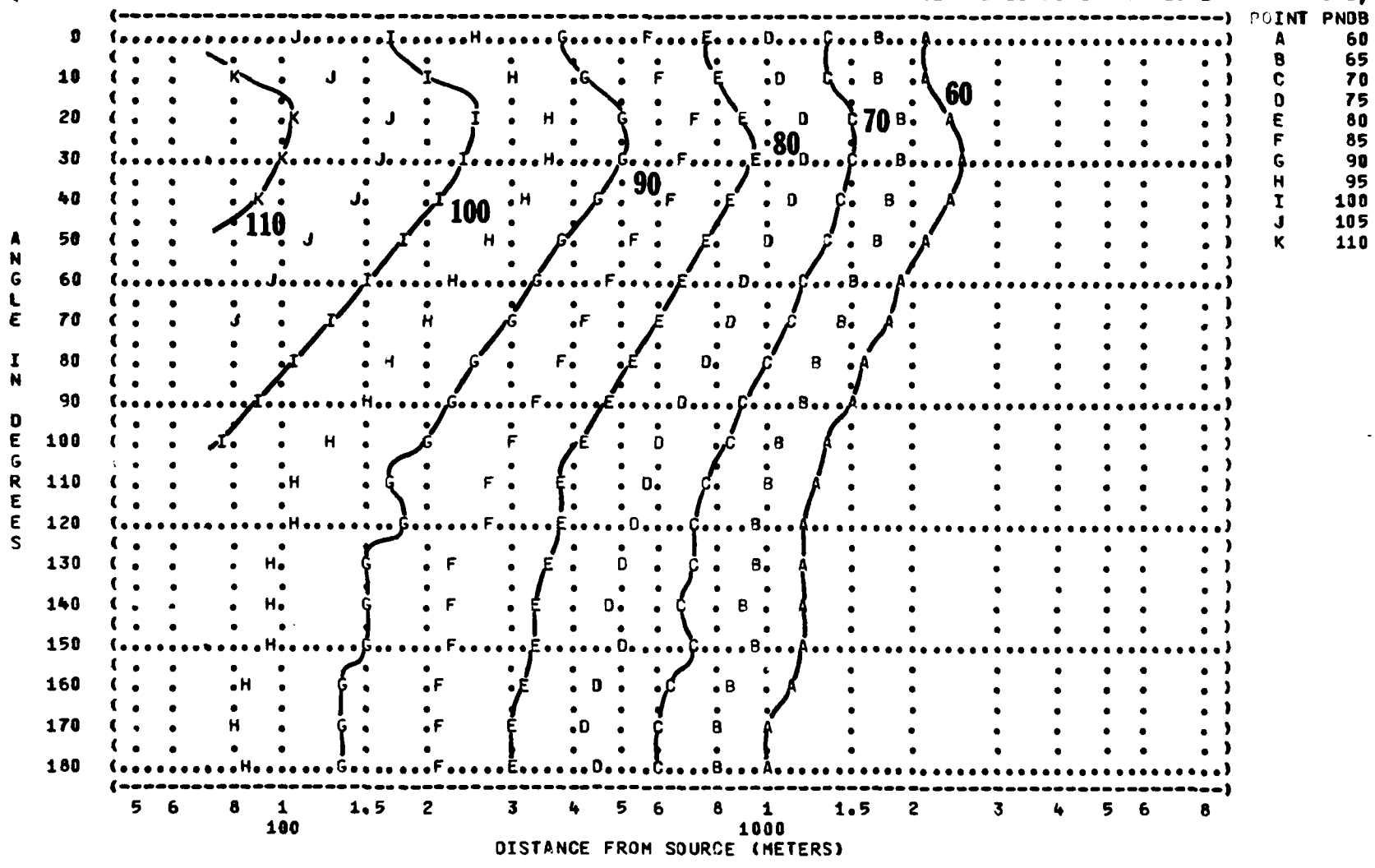
FIGURE: 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 16

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110

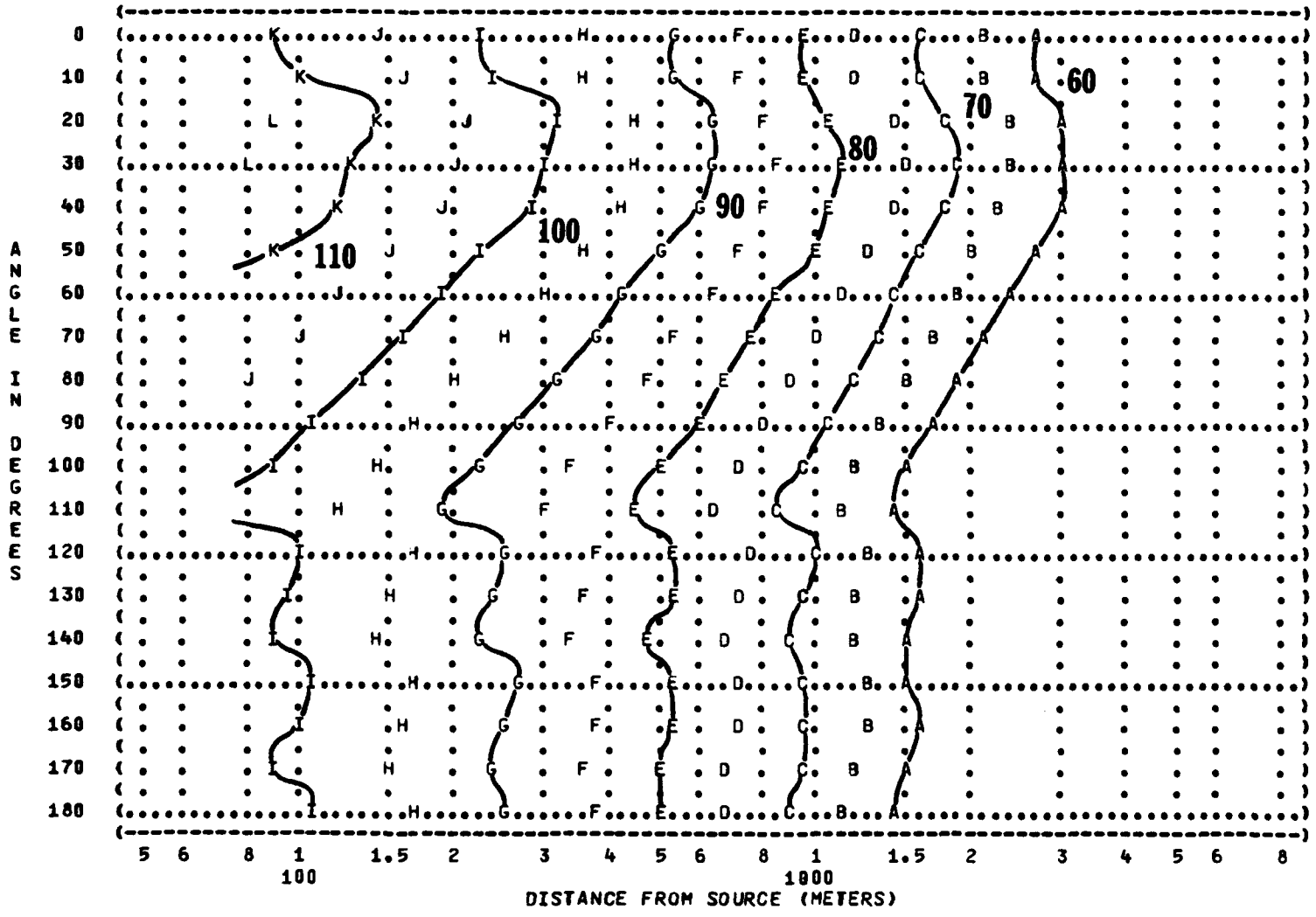
FIGURE 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 16



POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105
K	110
L	115

FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

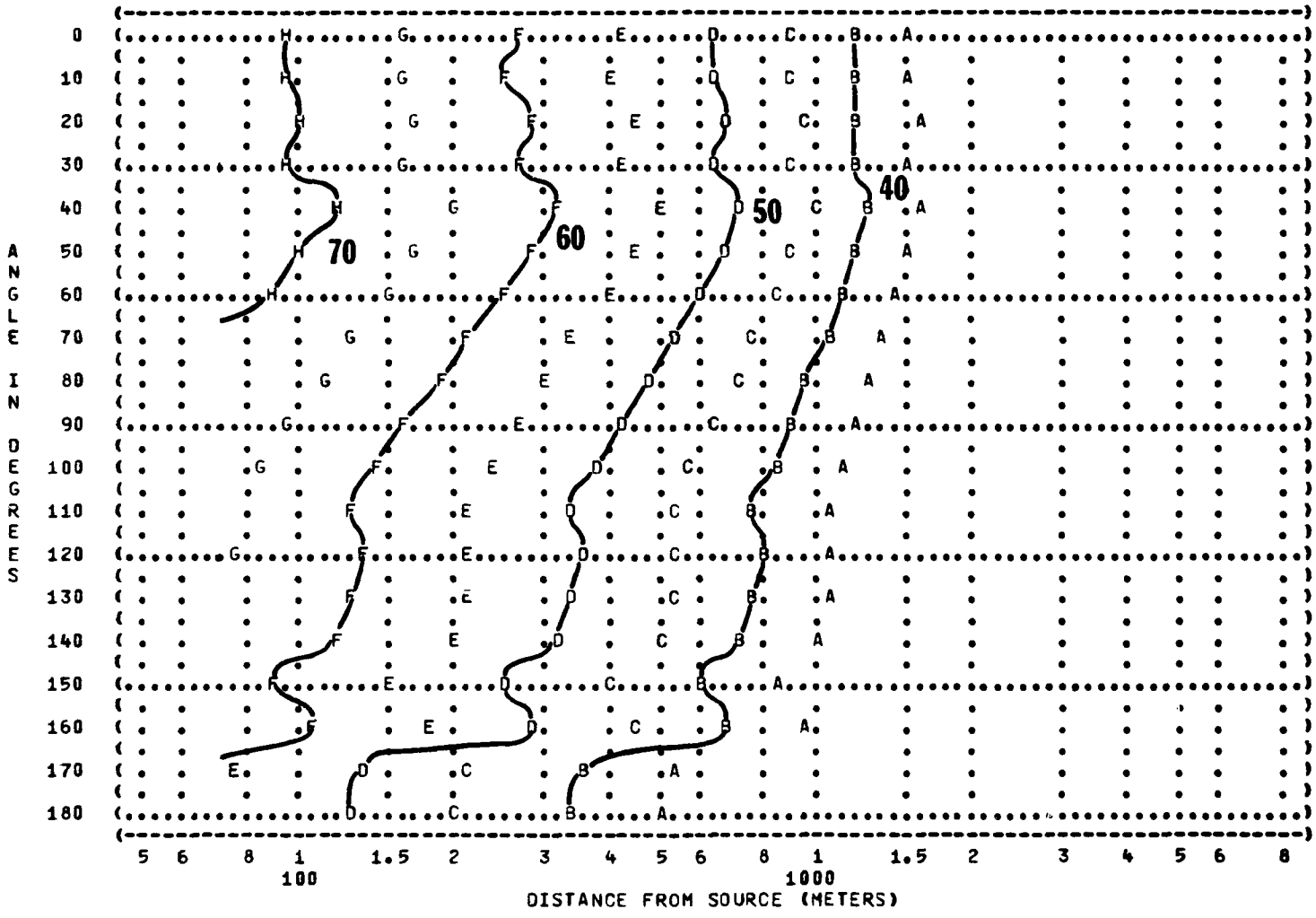


FIGURE: 8 PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

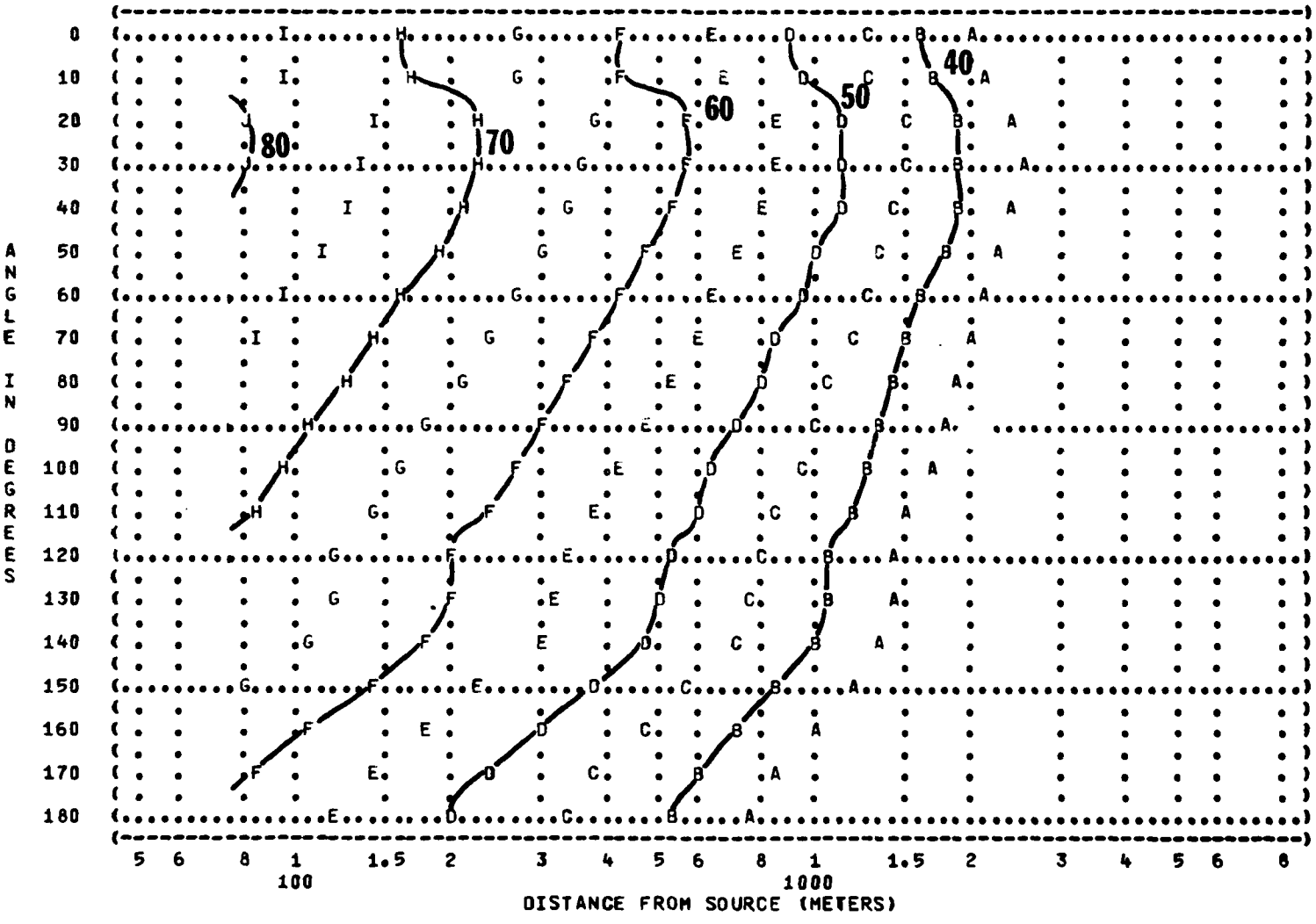


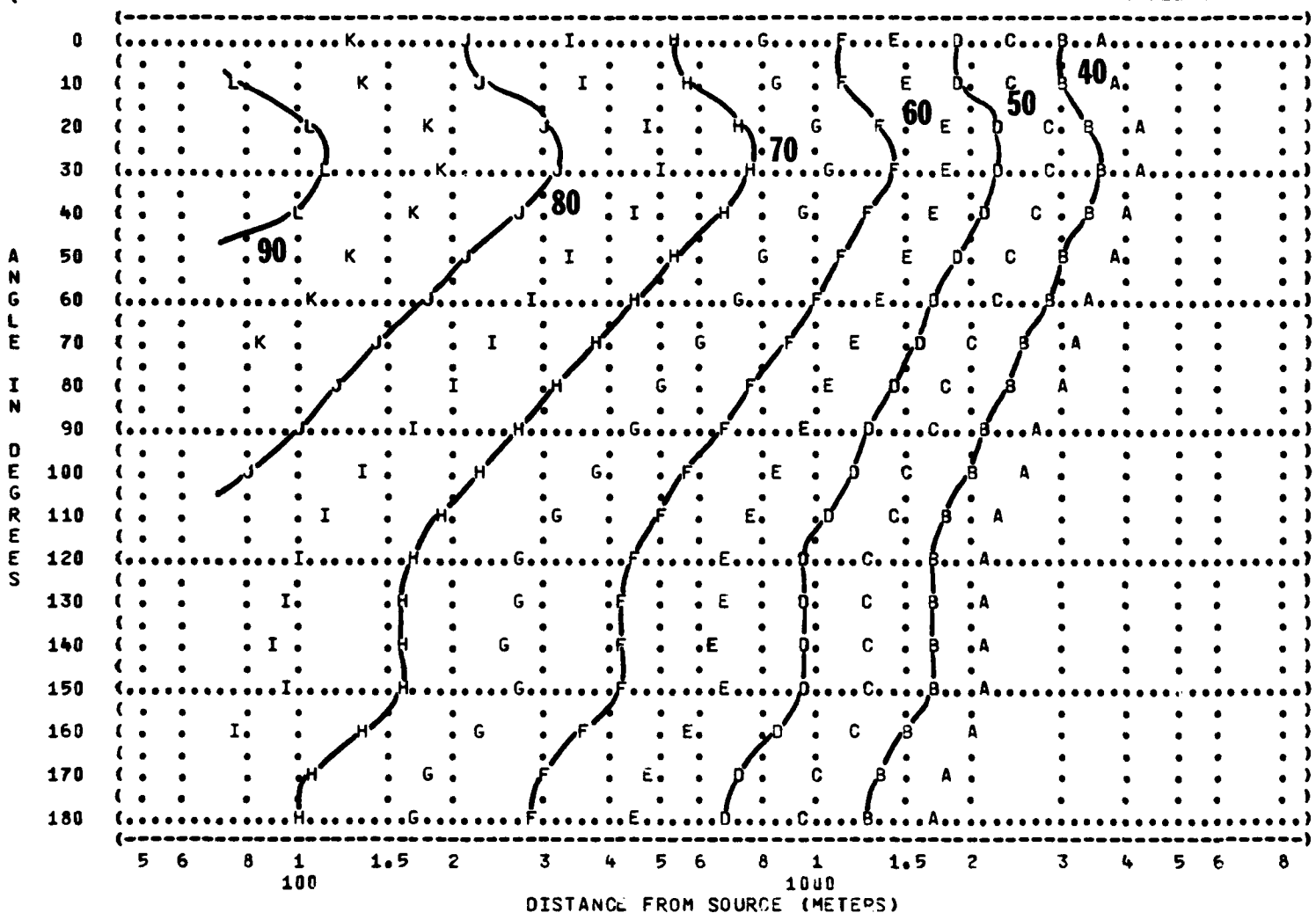
FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

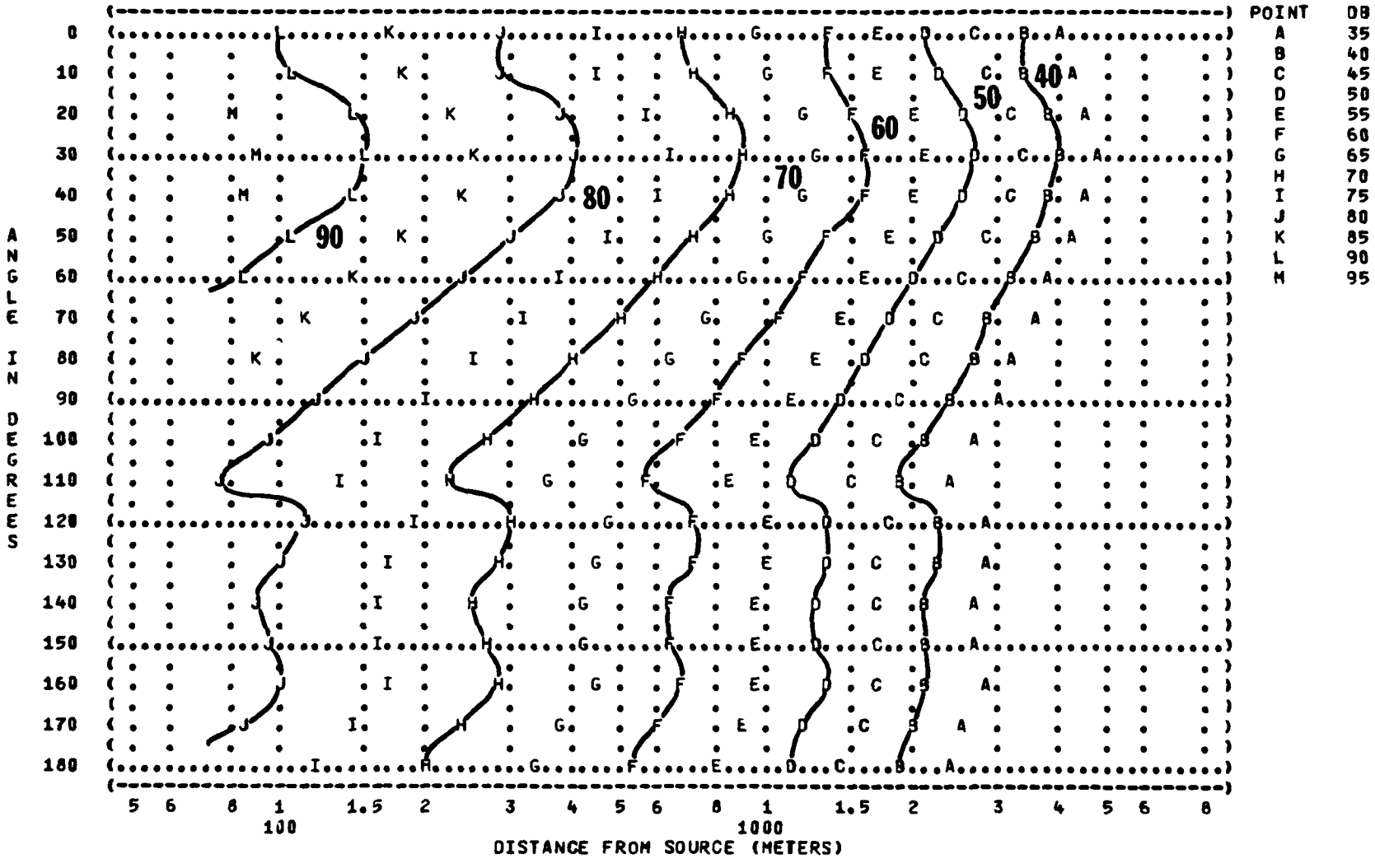
FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 17

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95

FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 7

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT MIN
A 960

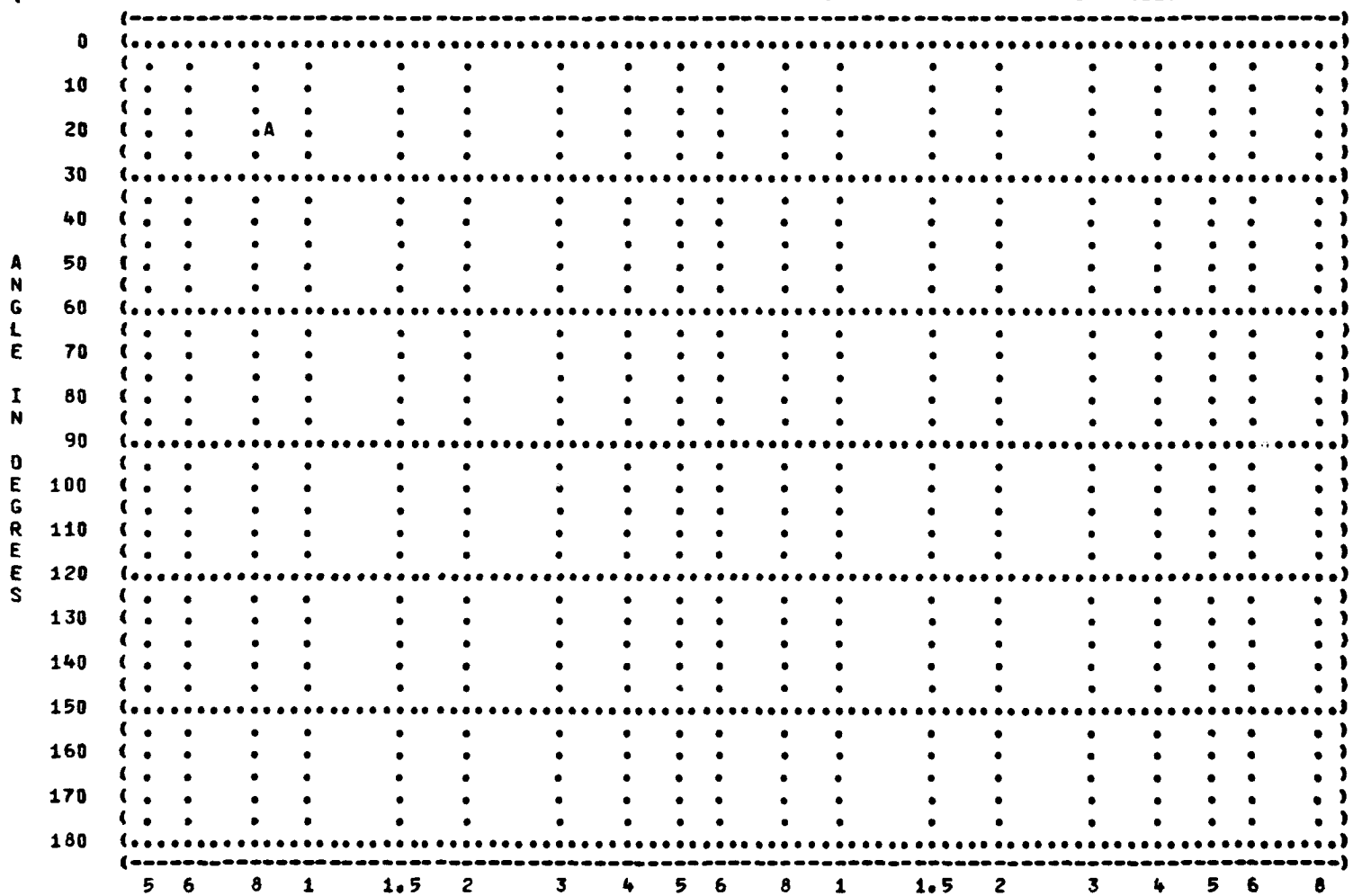


FIGURE: 9 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) EQUAL TIME CONTOURS (MINUTES)		IDENTIFICATION: OMEGA 1.4 TEST 79-761-001 RUN 01 22 MAR 79 PAGE 8
NOISE SOURCE/SUBJECT: F-15 IN THE AF32A-23 SUPPRESSOR 2 F100-PW-100 ENGINES FAR-FIELD NOISE	OPERATION: IDLE POWER (65% RPM) BOTH ENGINES GROUND RUNUP (SUPPRESSED)	METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

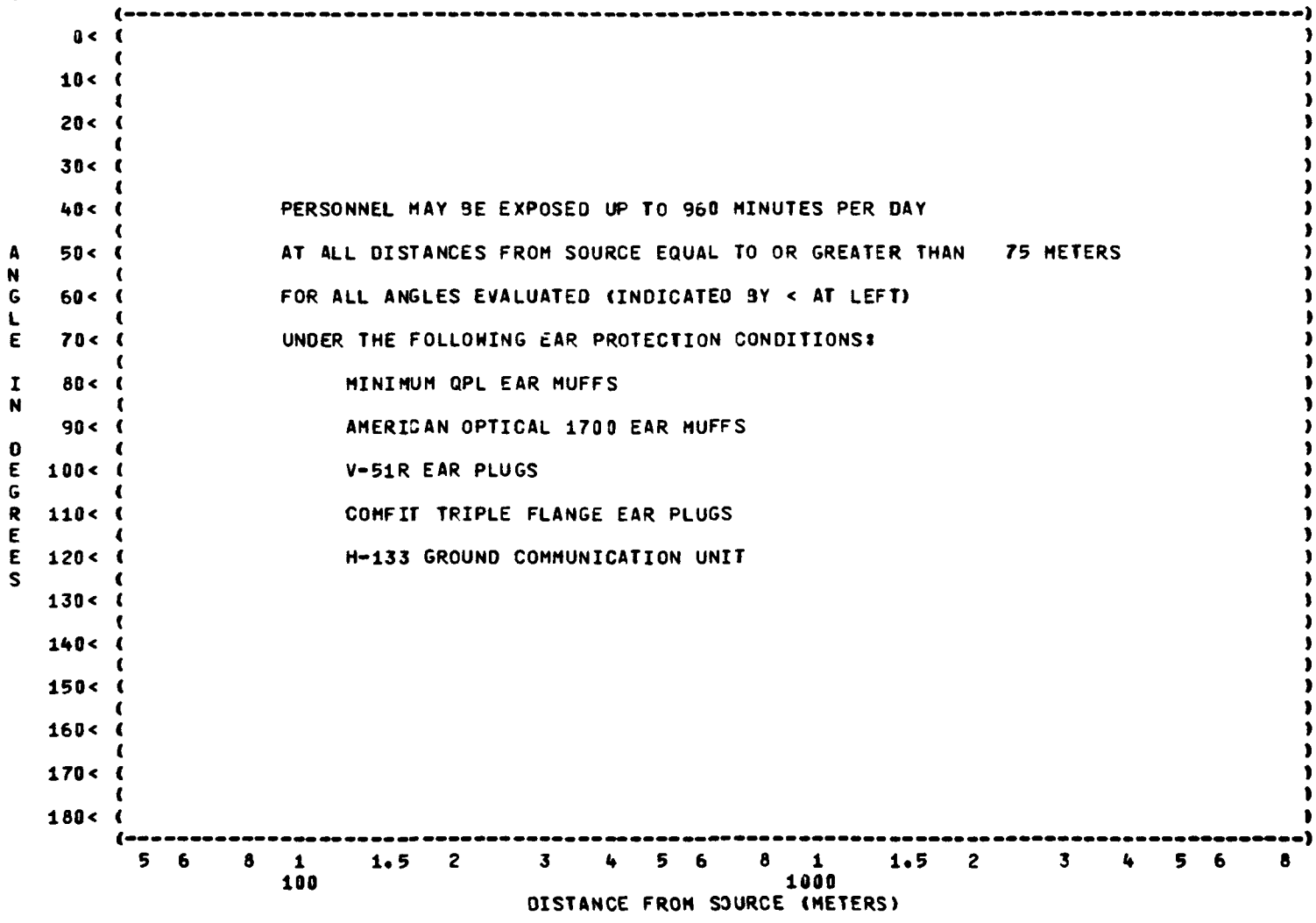


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 7

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	MIN
A	960
B	480

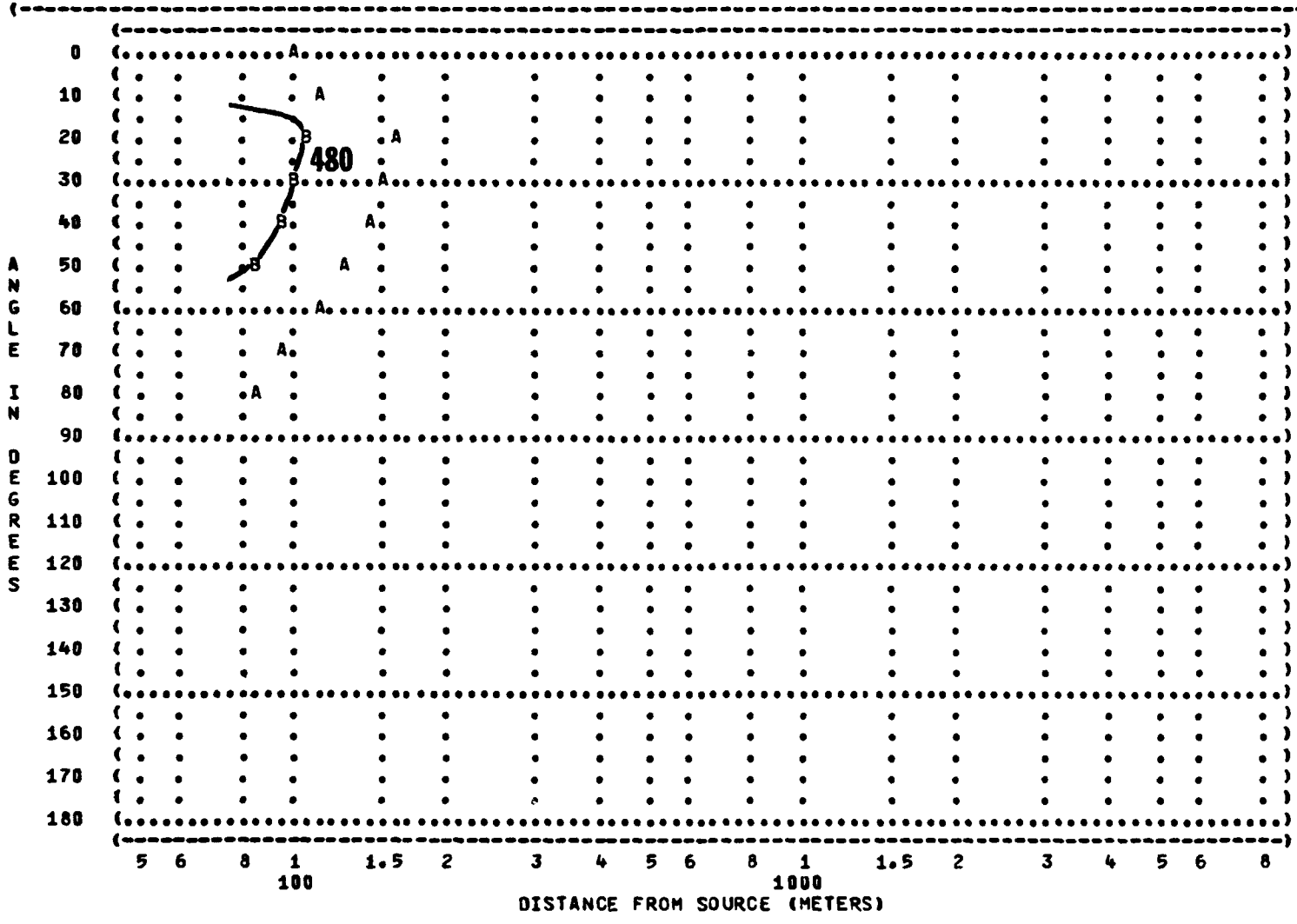


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 8

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

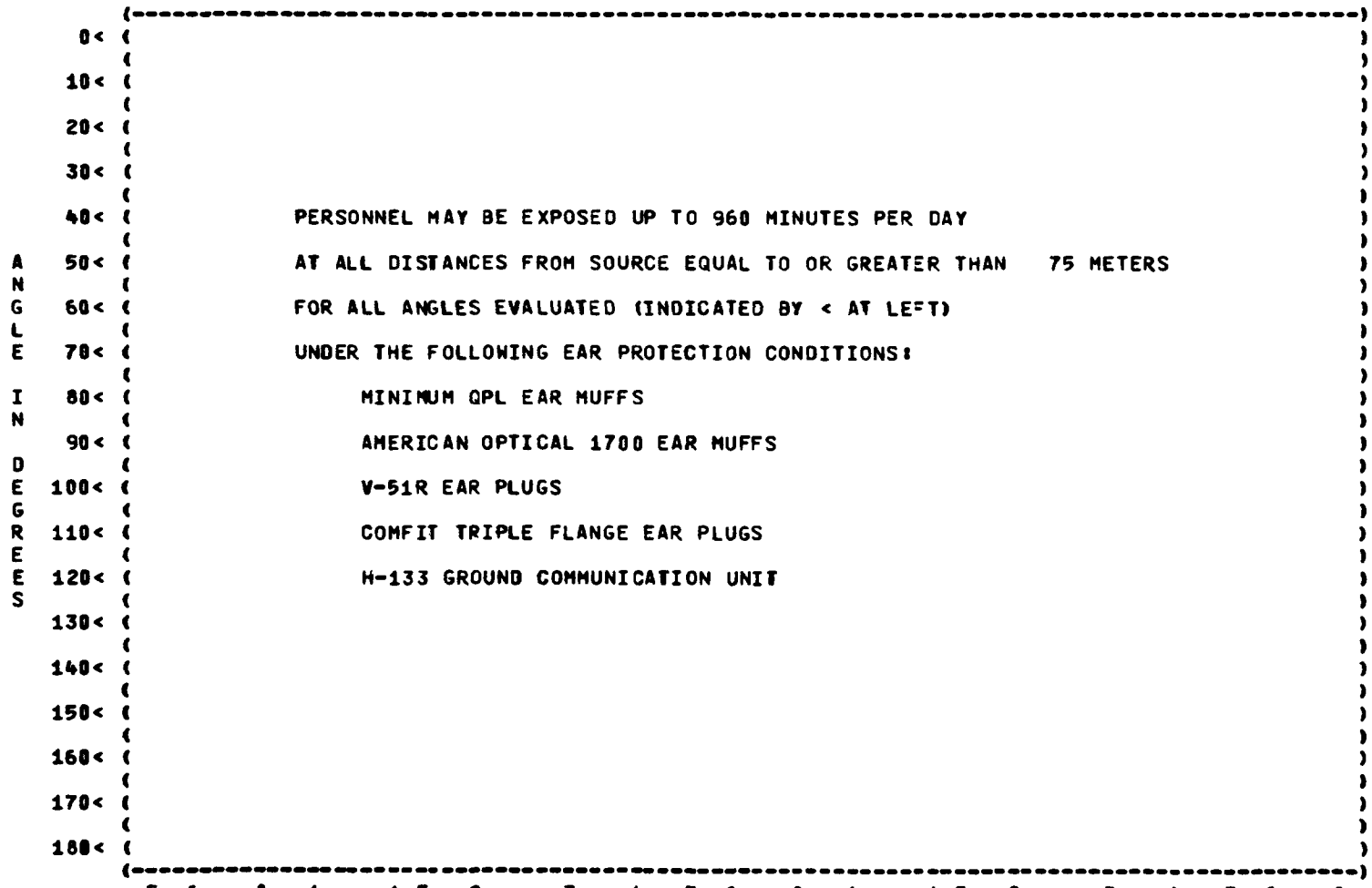


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 7

POINT	MIN
A	960
B	480
C	240
D	120
E	60

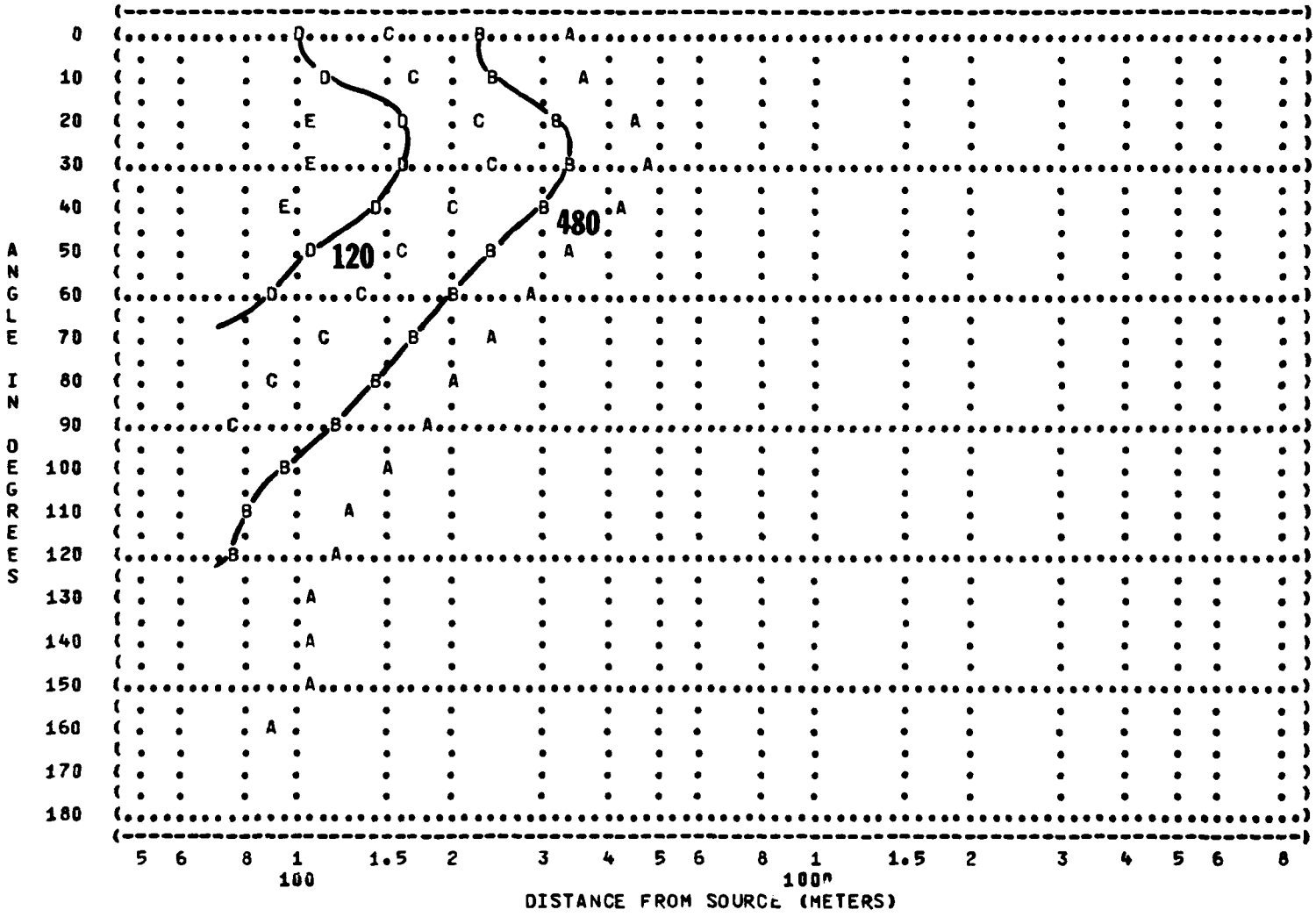


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 8

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

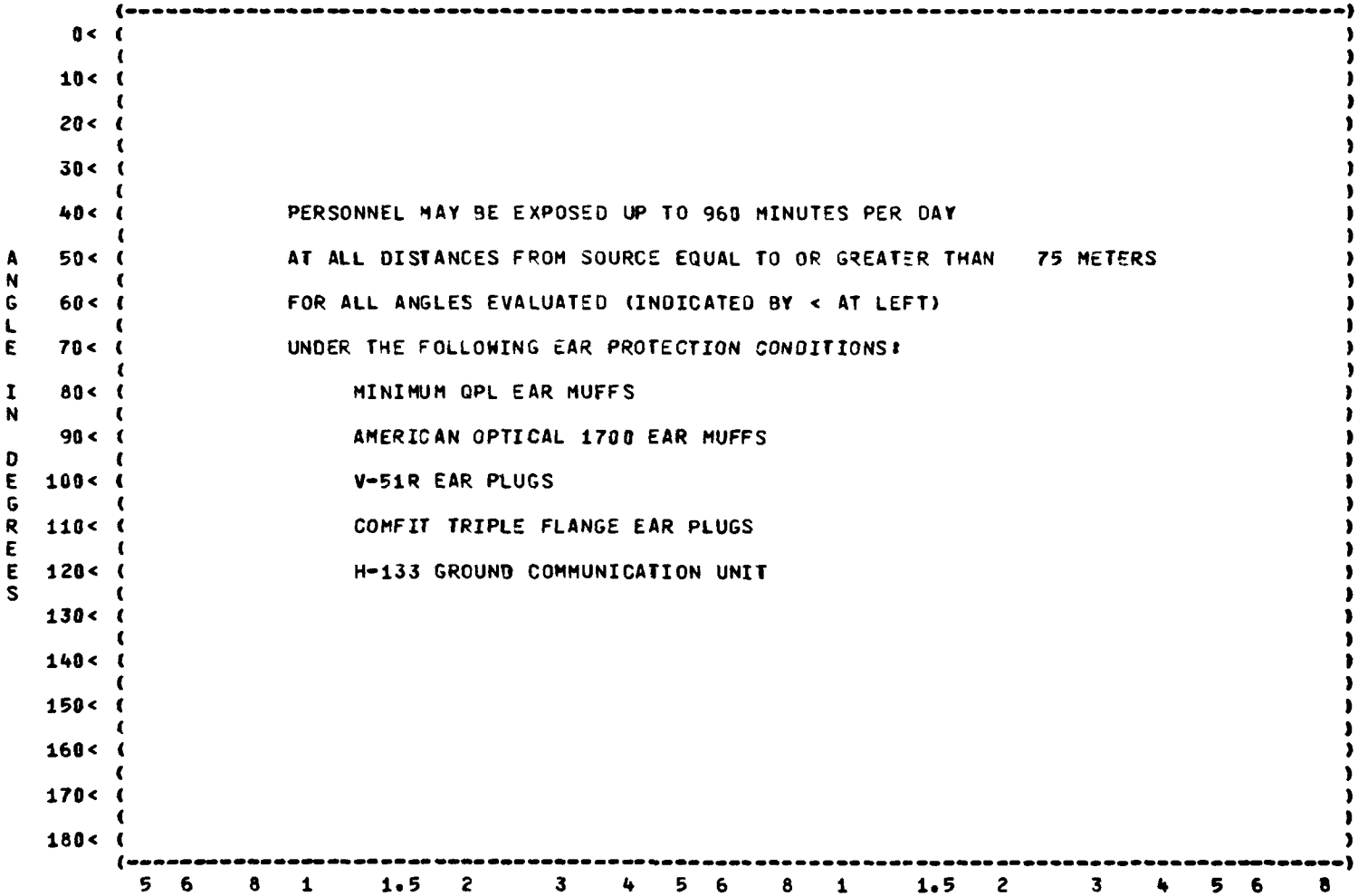


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 7

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	MIN
A	960
B	480
C	240
D	120
E	60
F	30

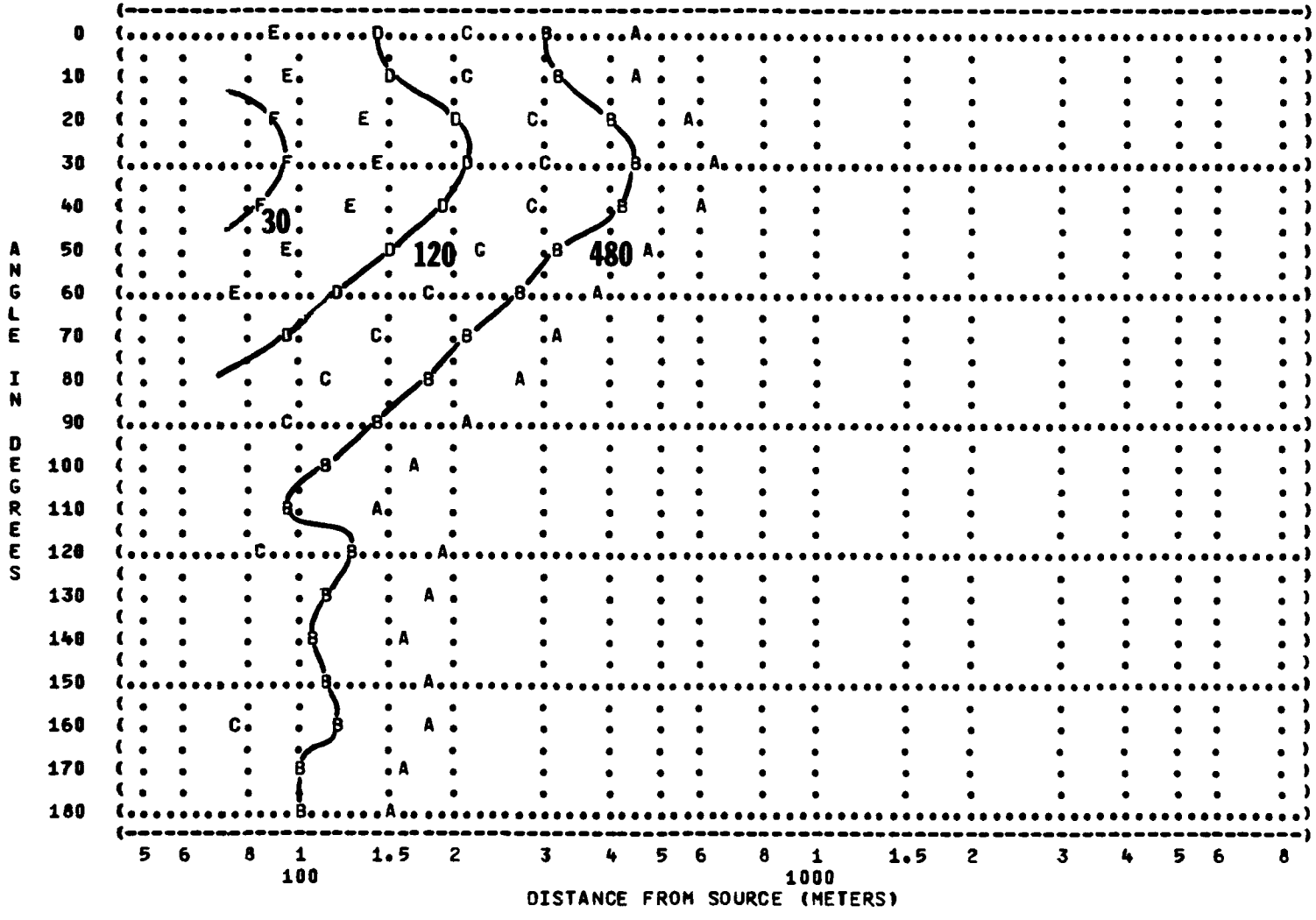


FIGURE 9 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
MINIMUM QPL EAR MUFFS

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 8

POINT MIN
A 960

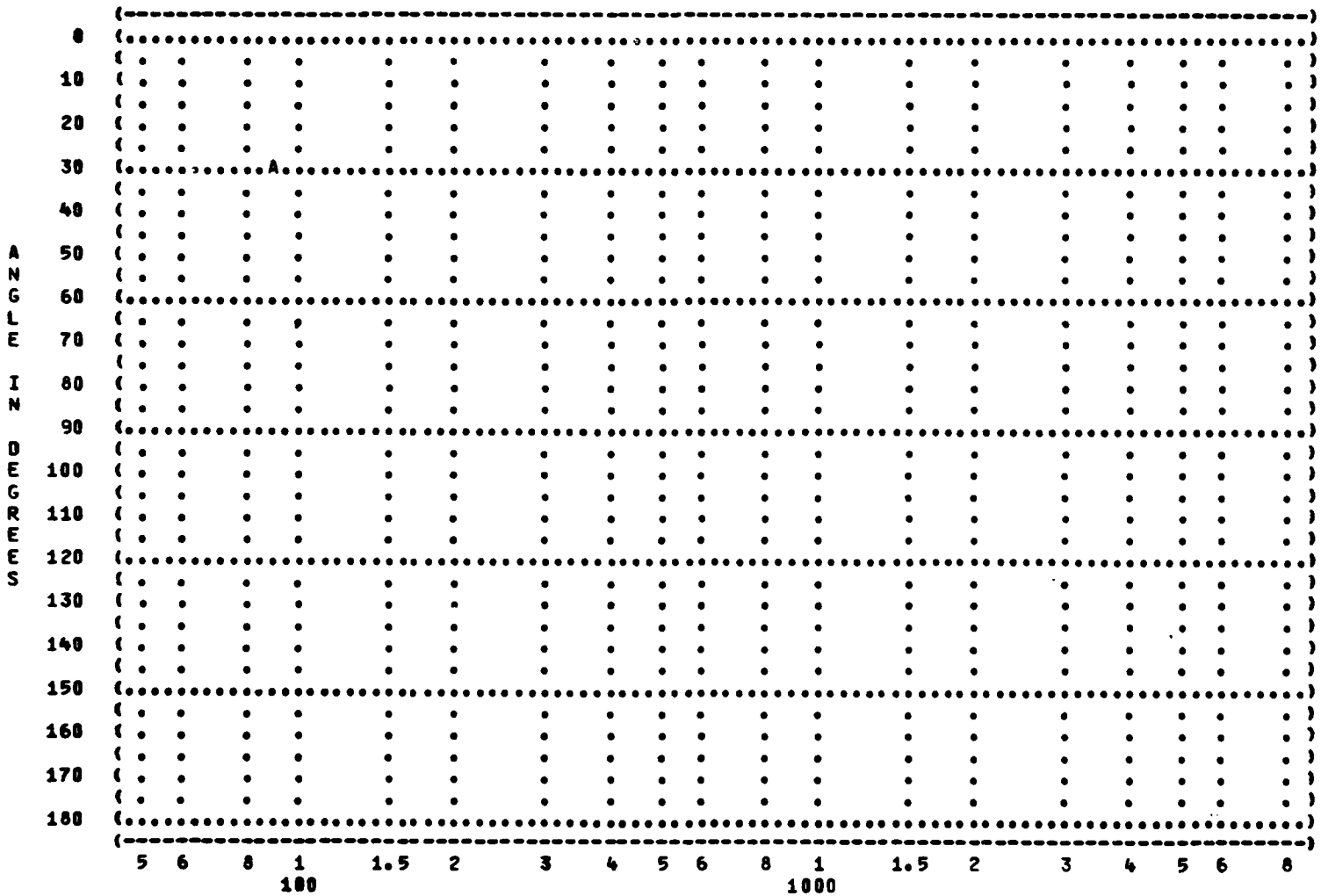


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
COMFIT TRIPLE FLANGE EAR PLUGS

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-881
RUN 04
22 MAR 79
PAGE 9

POINT MIN
A 960

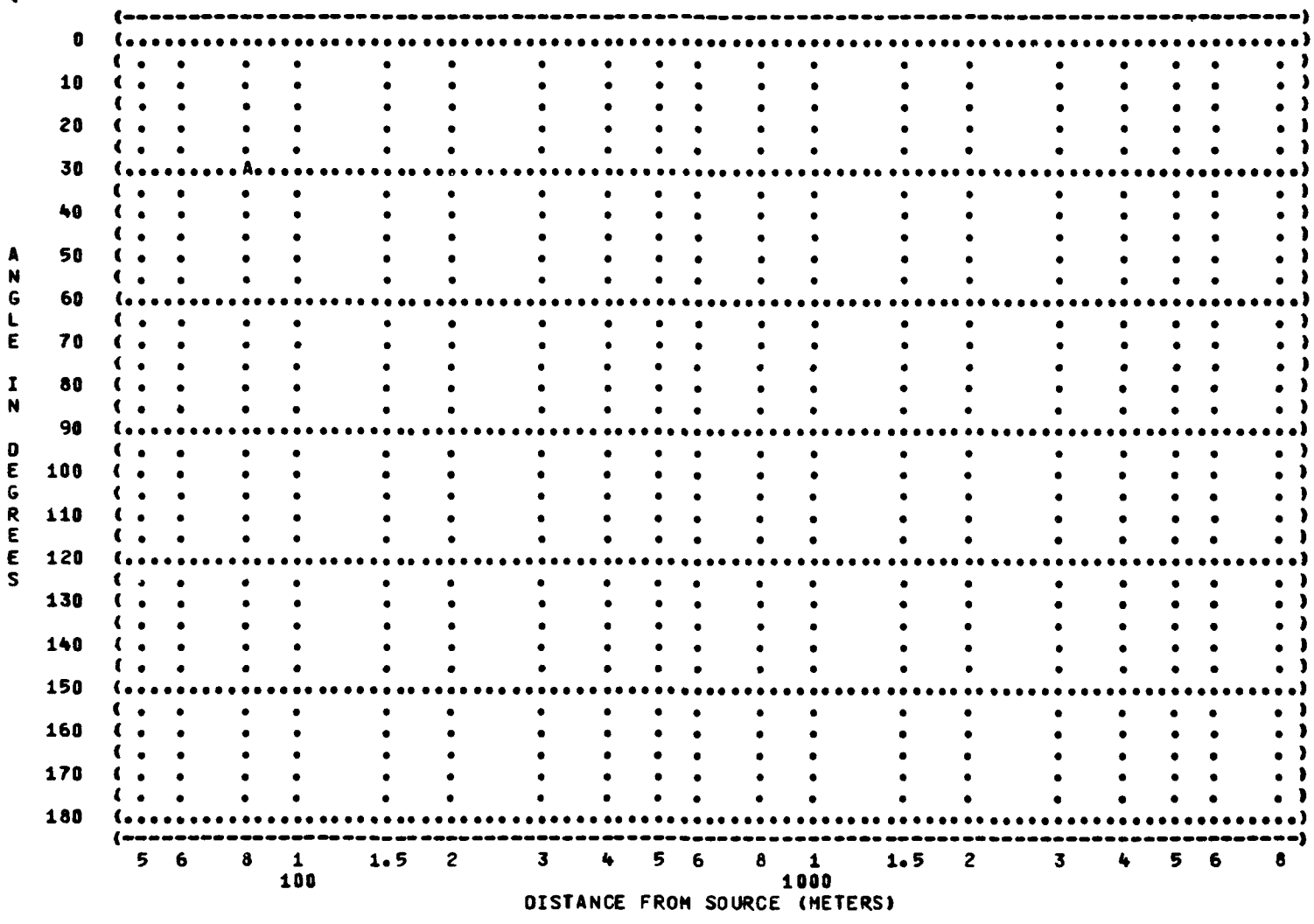


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-081
RUN 04
22 MAR 79
PAGE 10

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

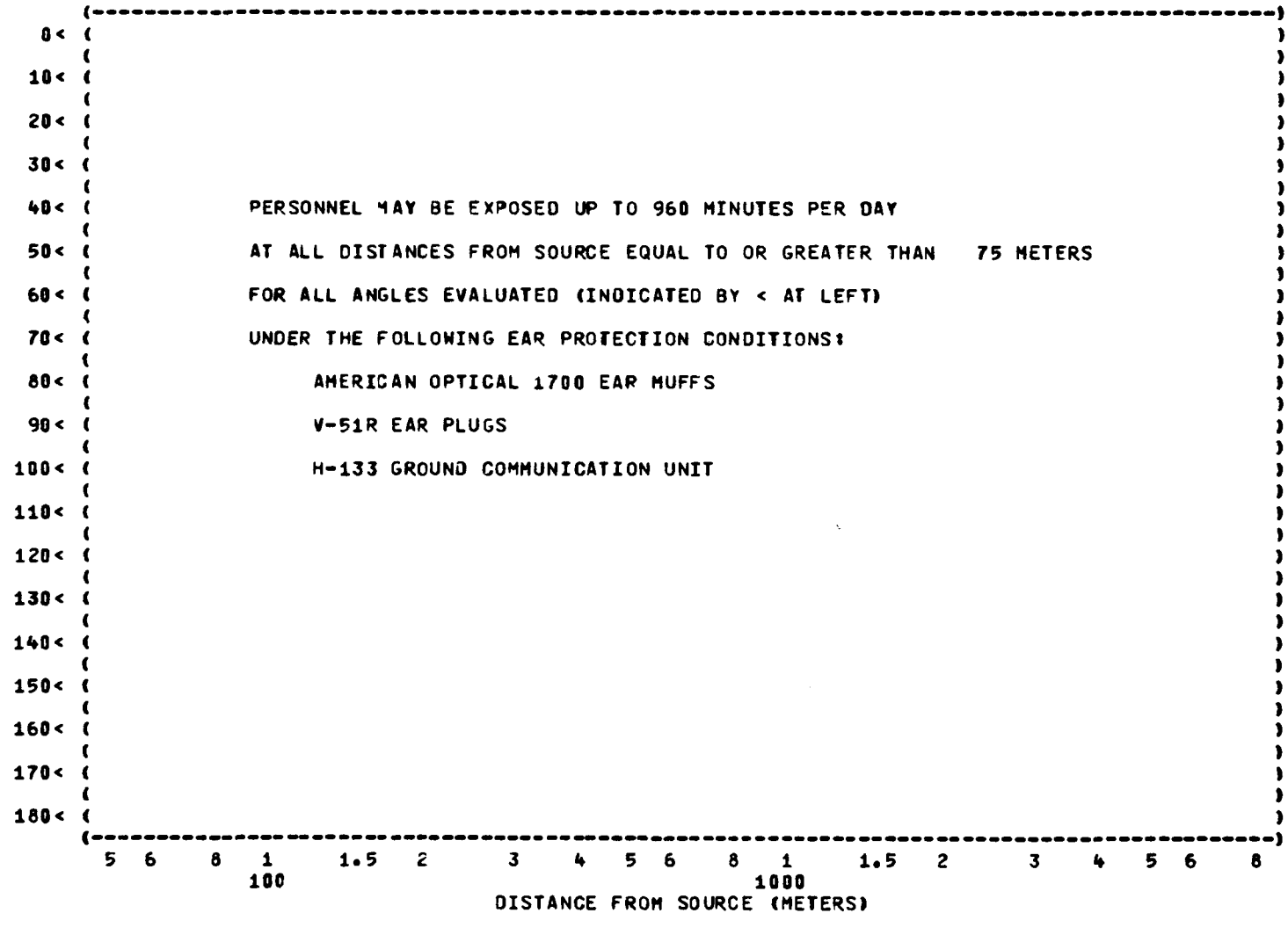


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 18

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

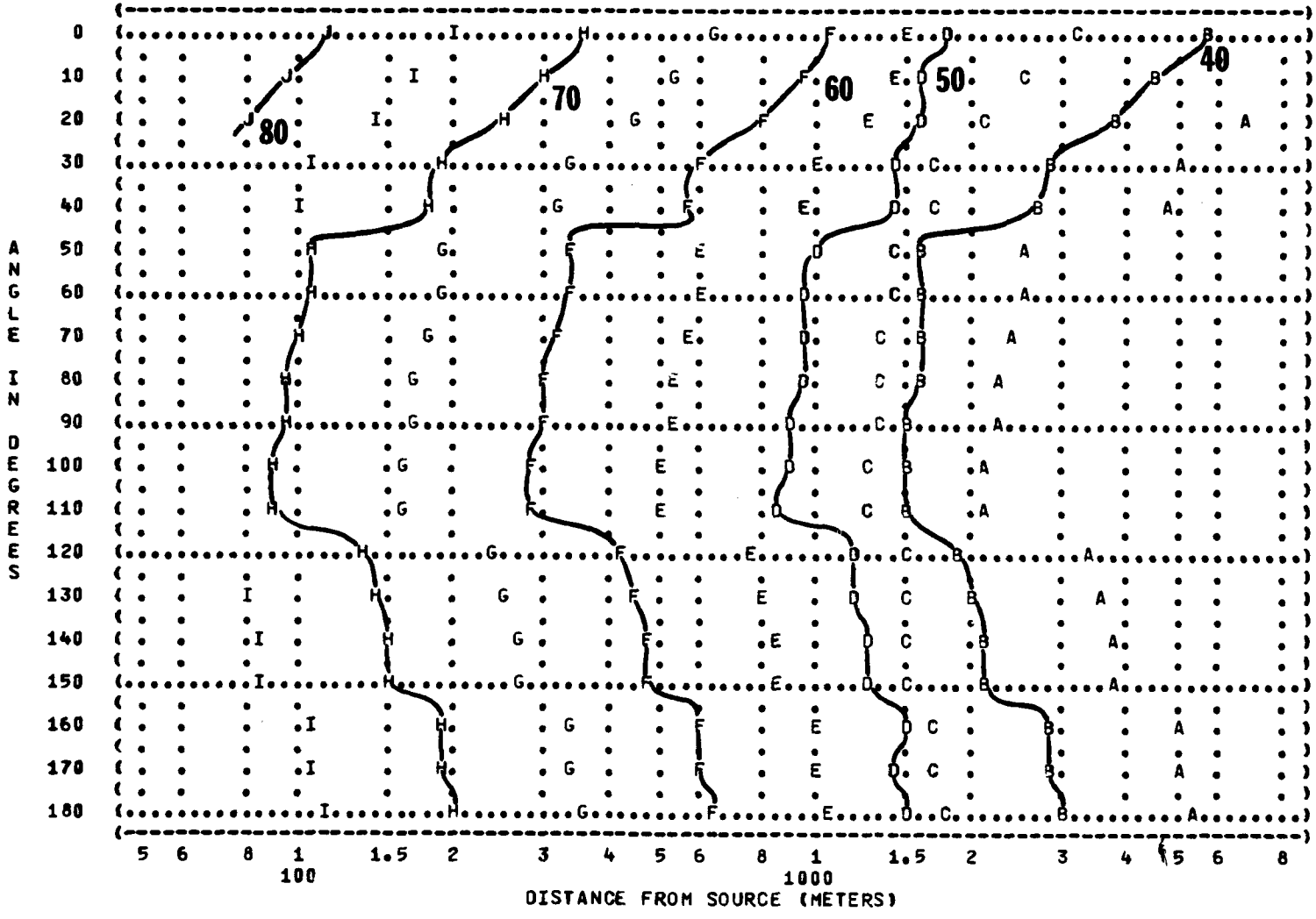


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 19

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

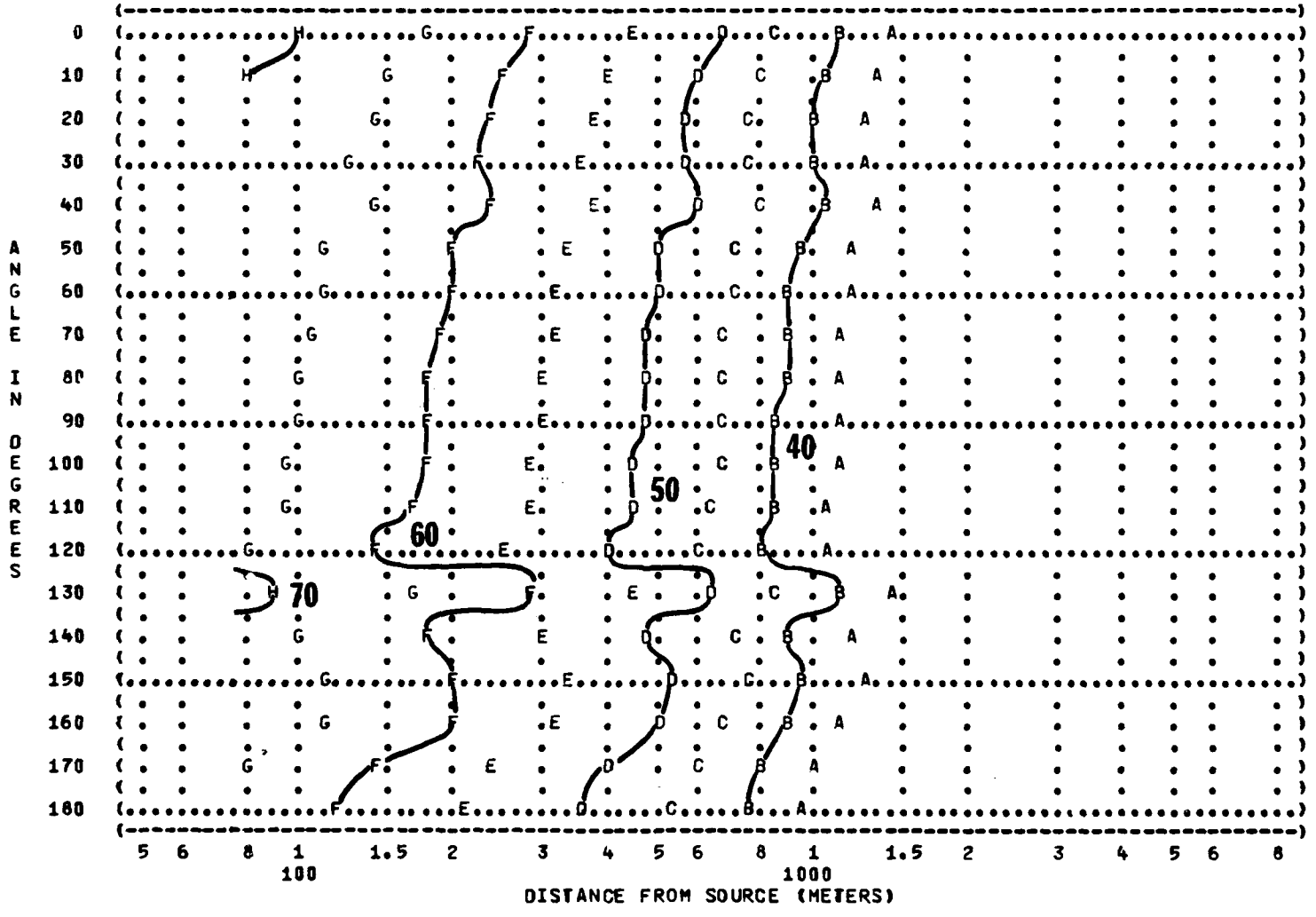


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 20

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

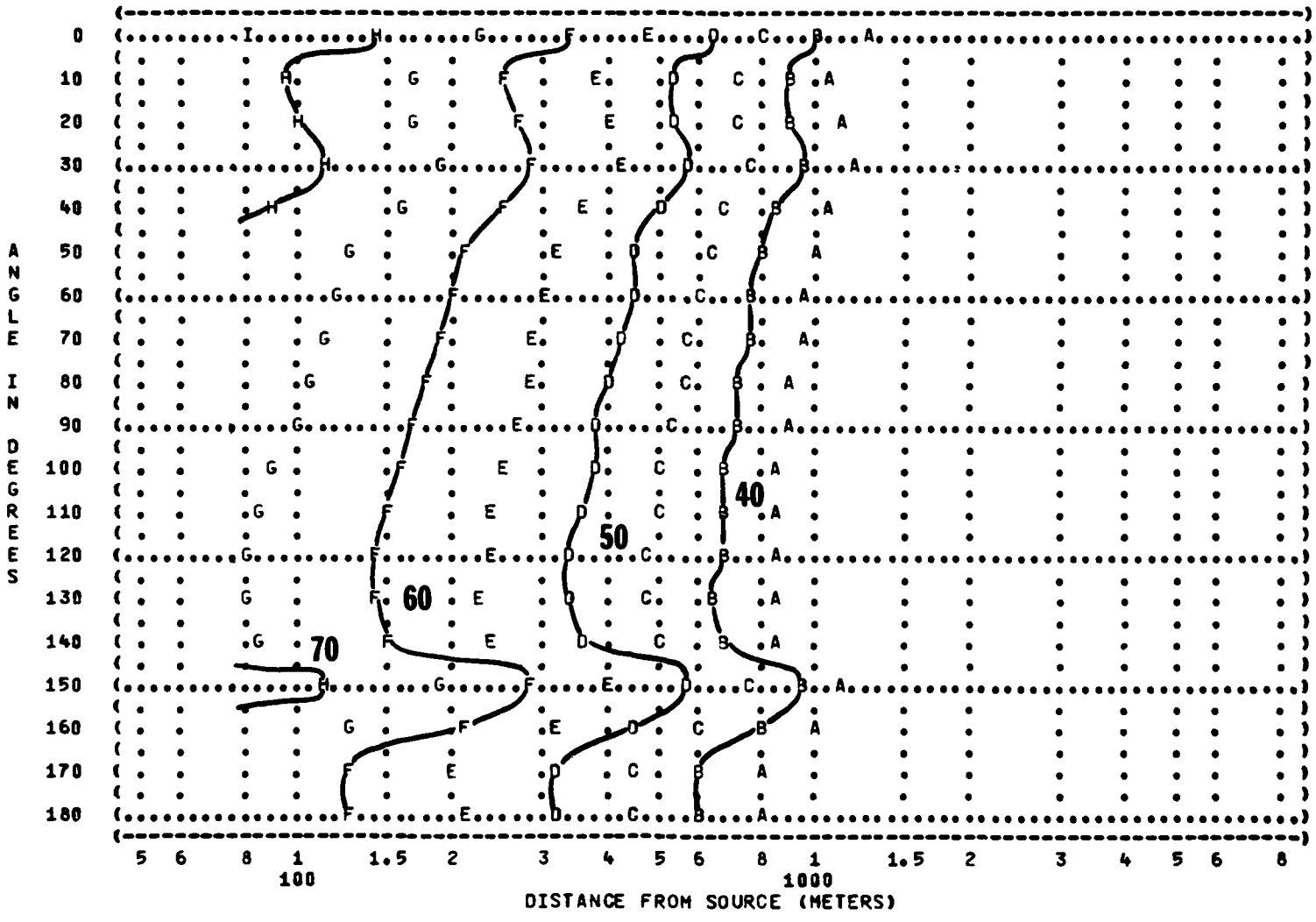


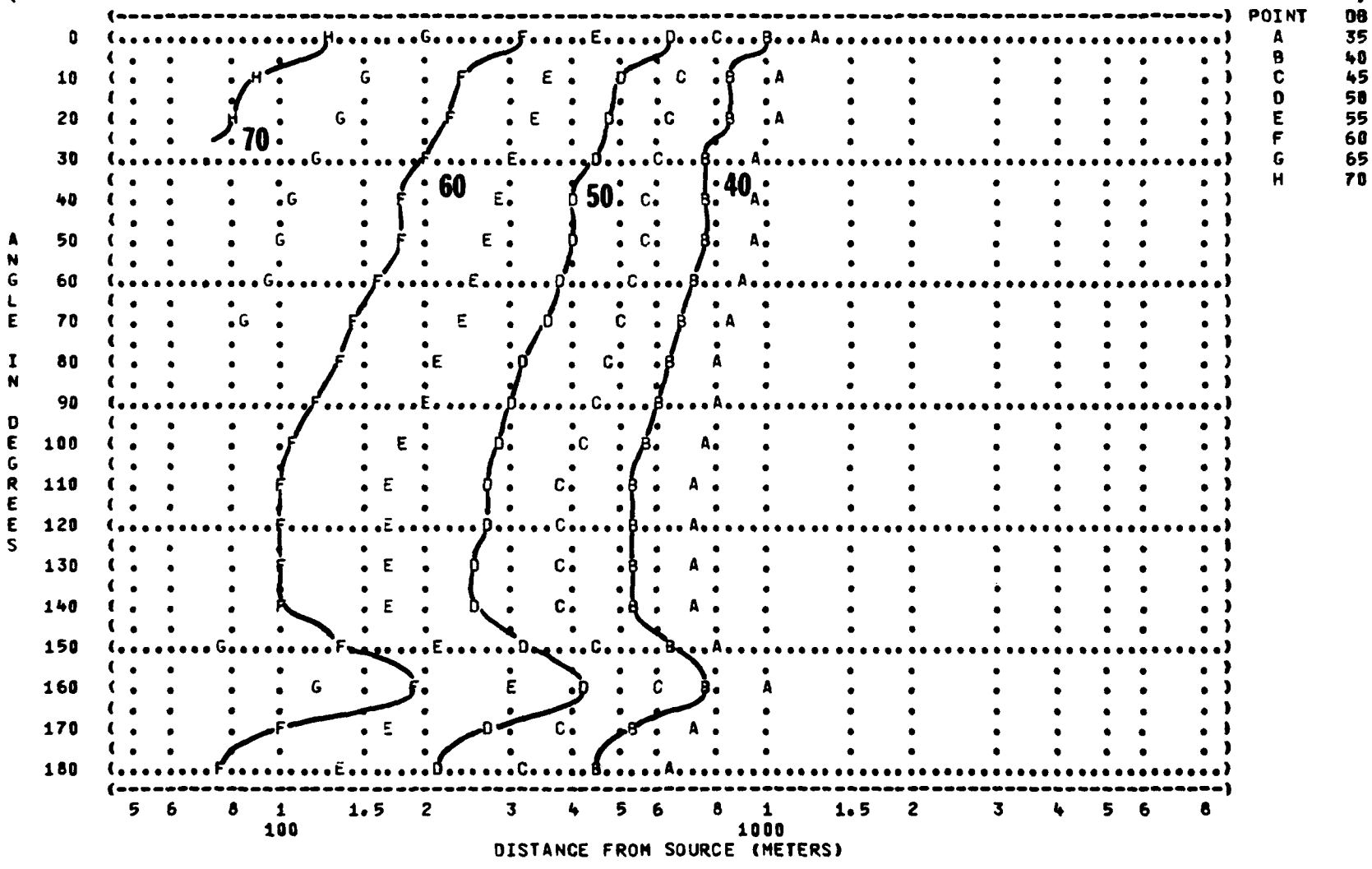
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 21



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01

22 MAR 79

PAGE 22

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

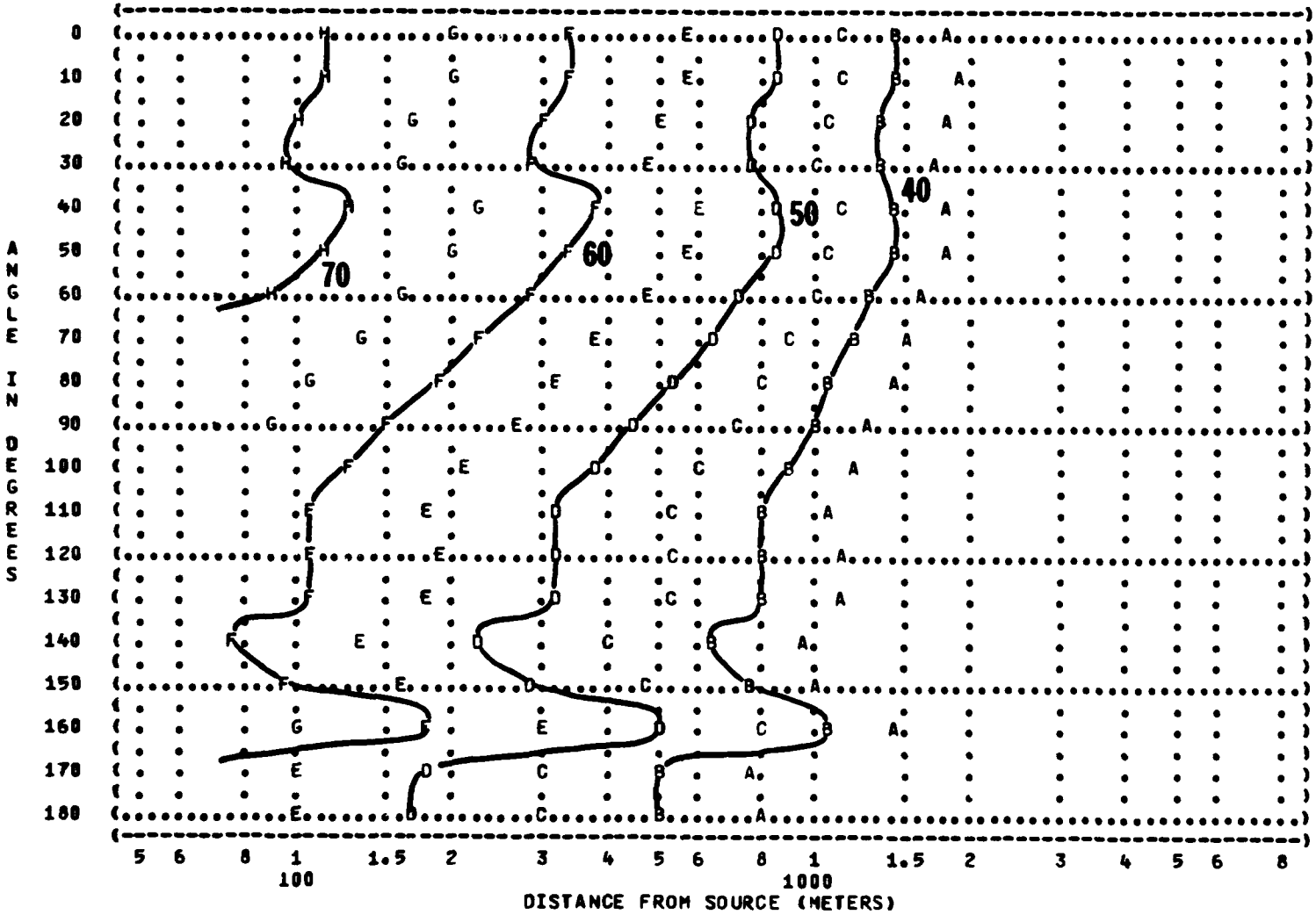


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 23

NOISE SOURCE/SUBJECT:
F-15 ON THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

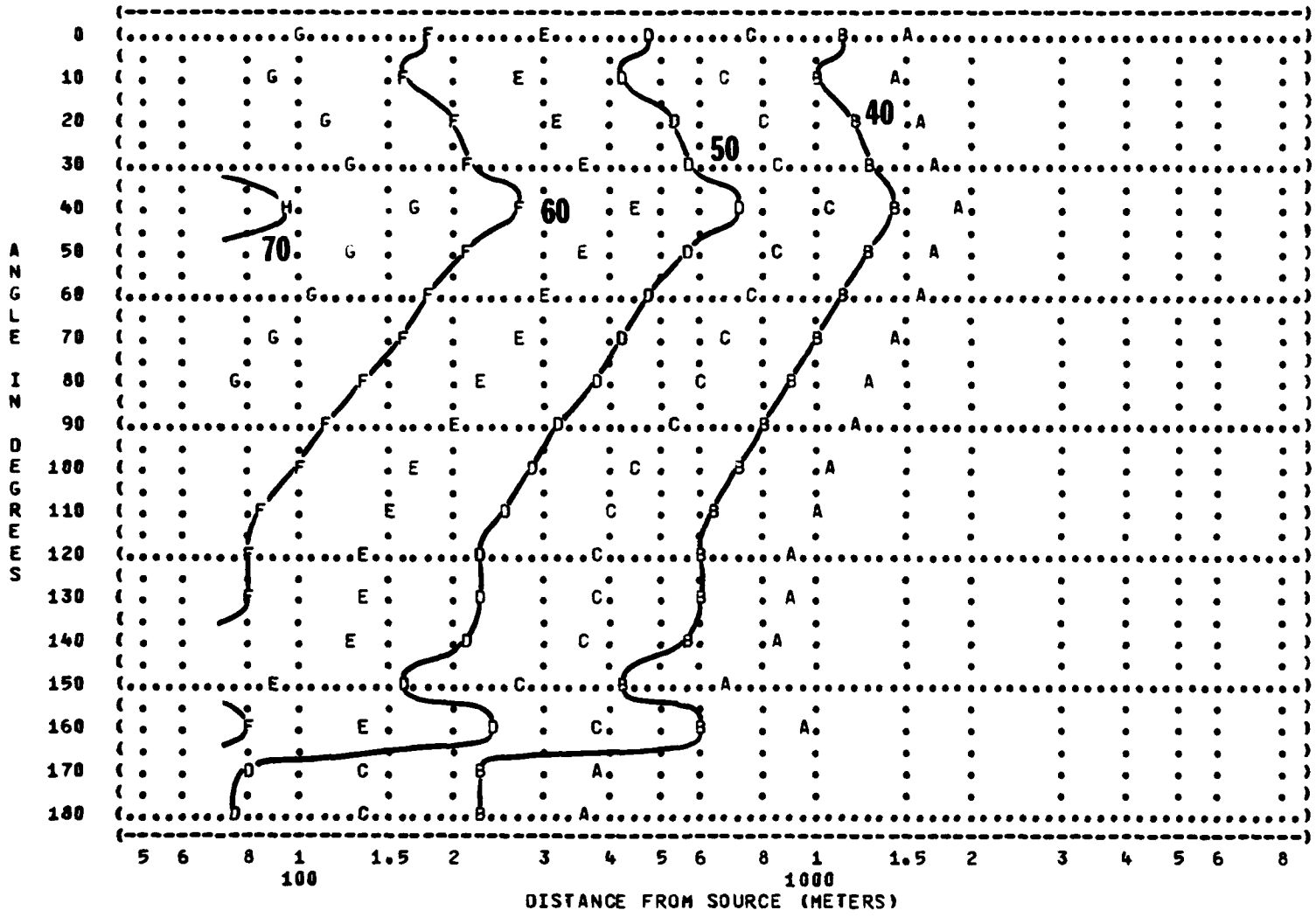


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

IDENTIFICATION:
ONEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 24

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

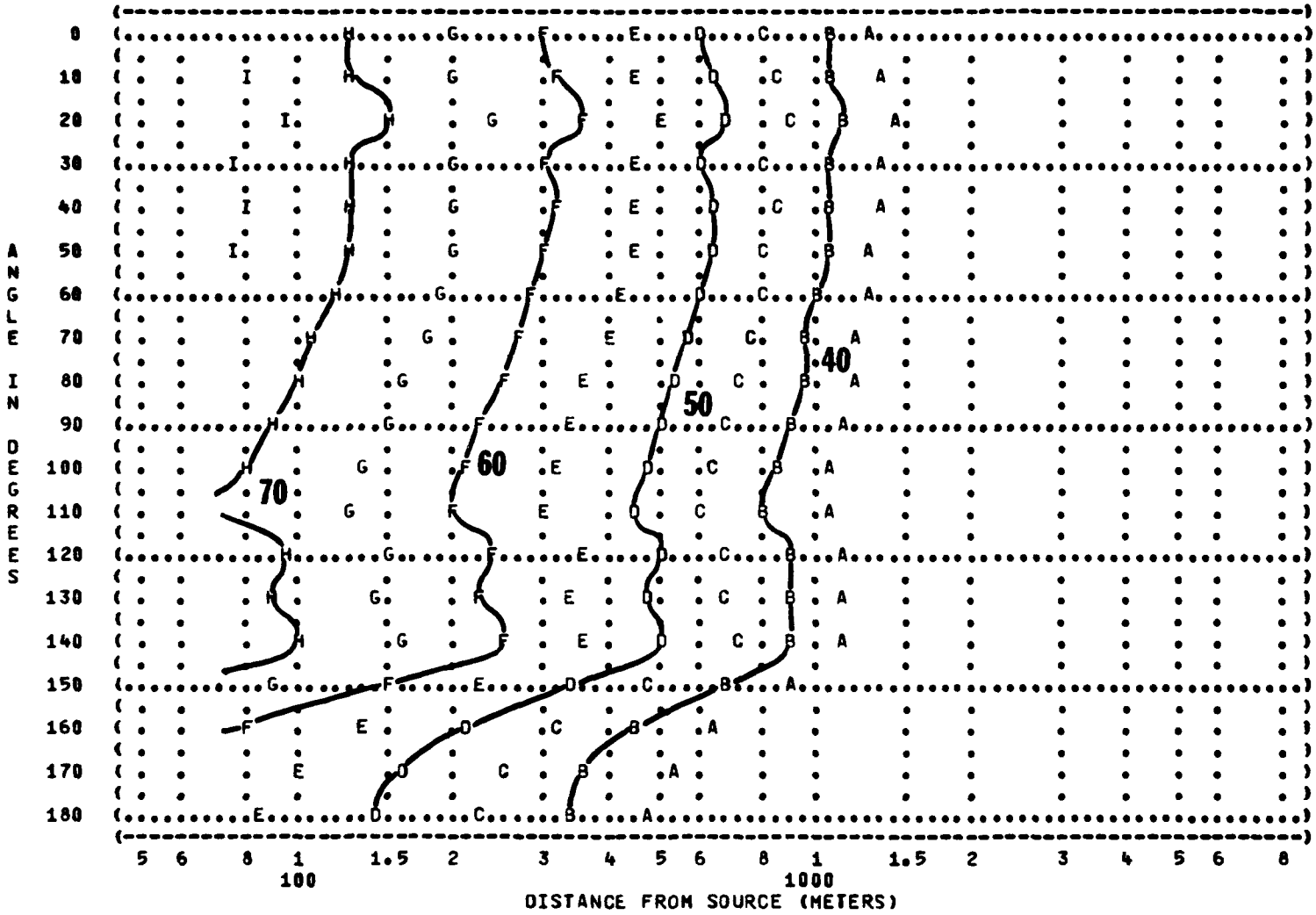


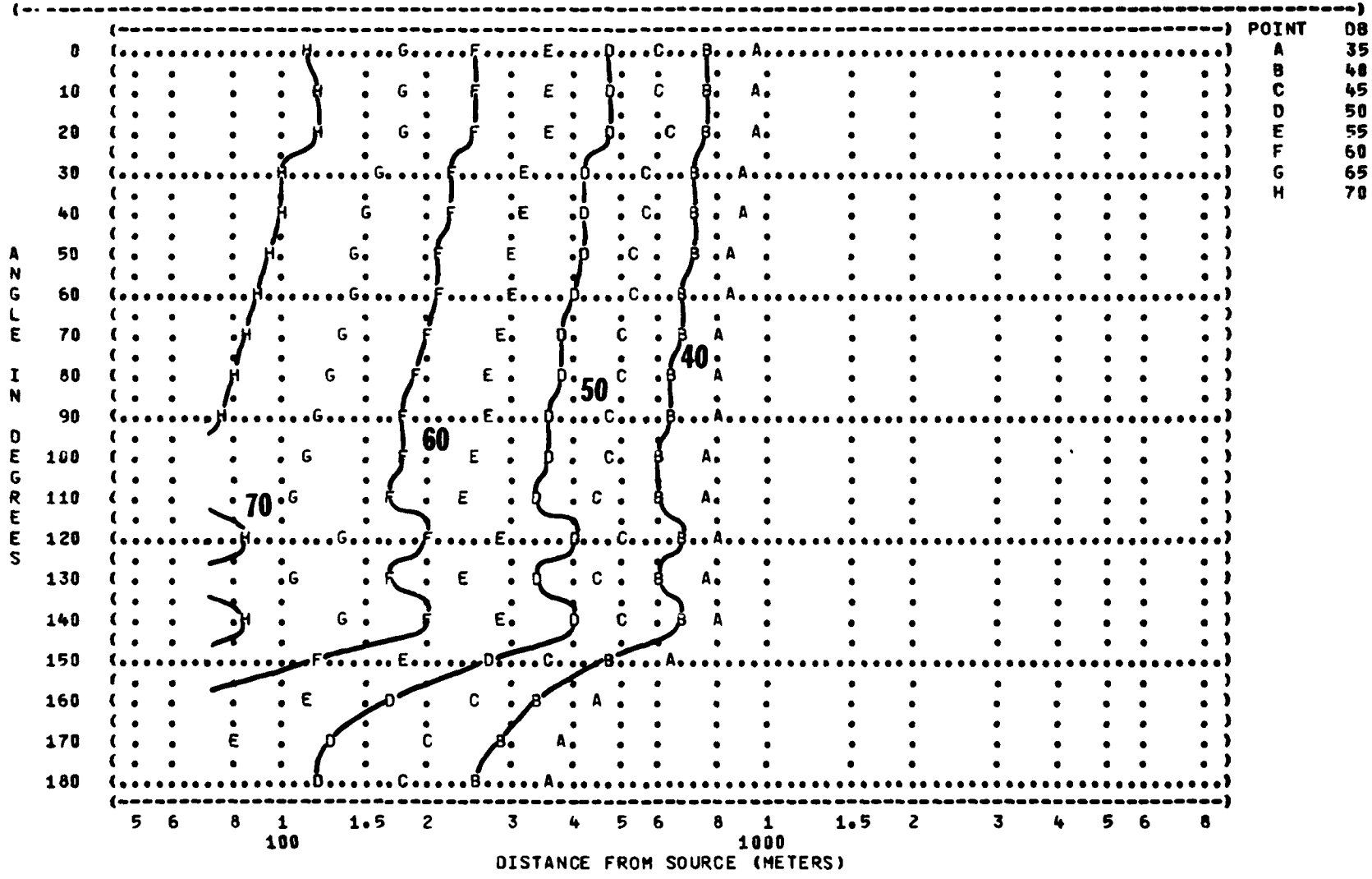
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 25



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 01
22 MAR 79
PAGE 26

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
IDLE POWER (65% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMI = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

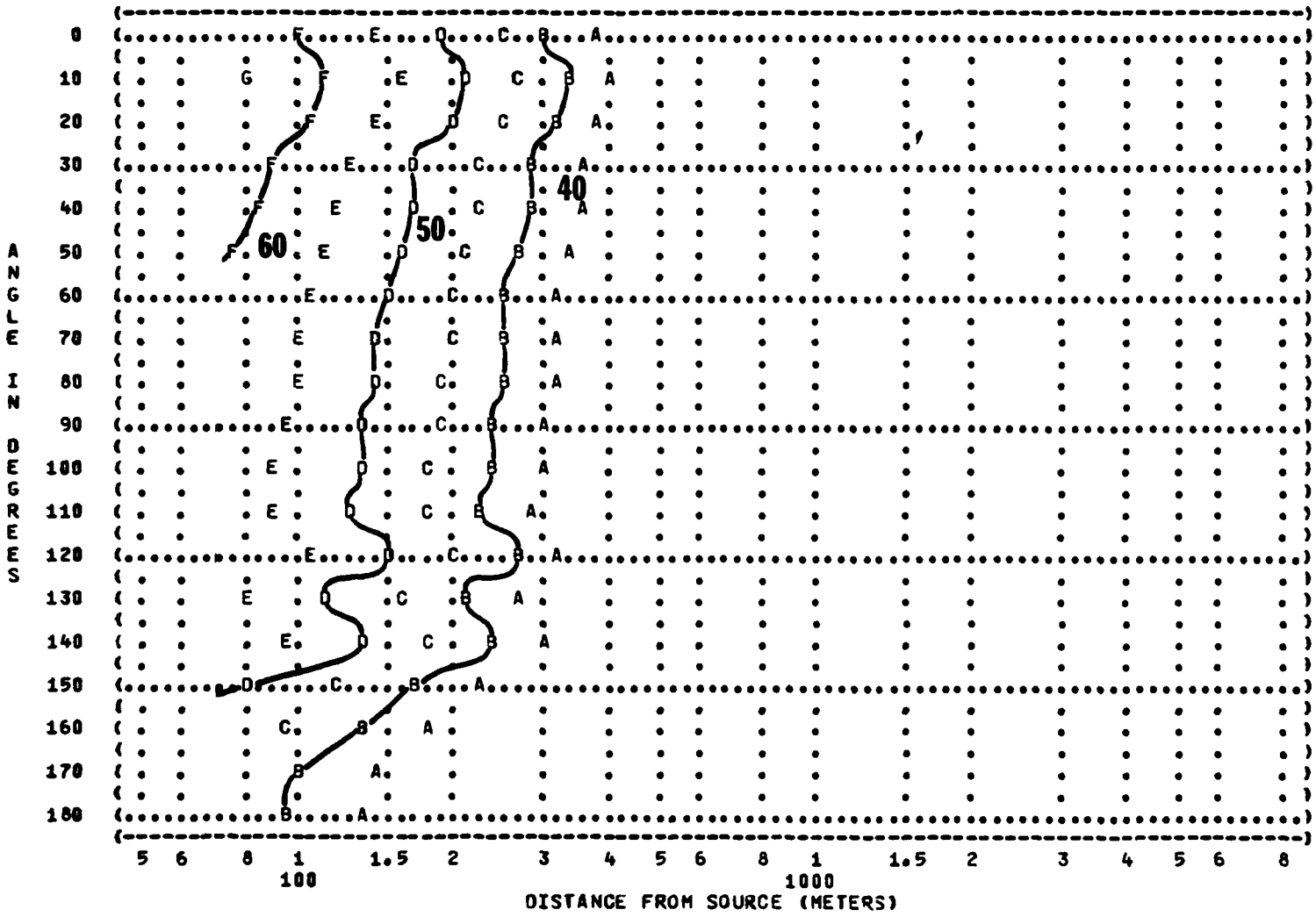


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 18

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

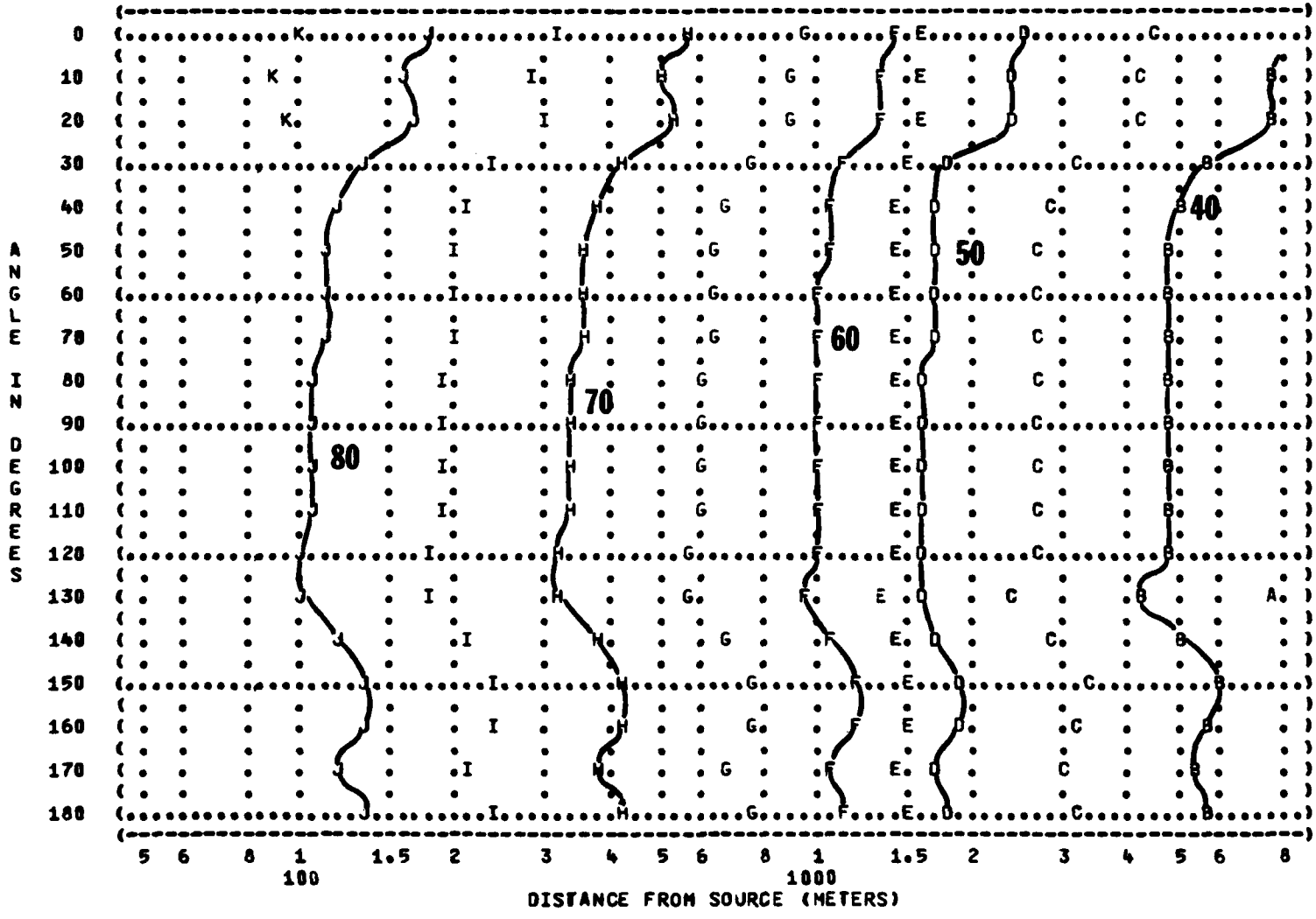


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 19

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

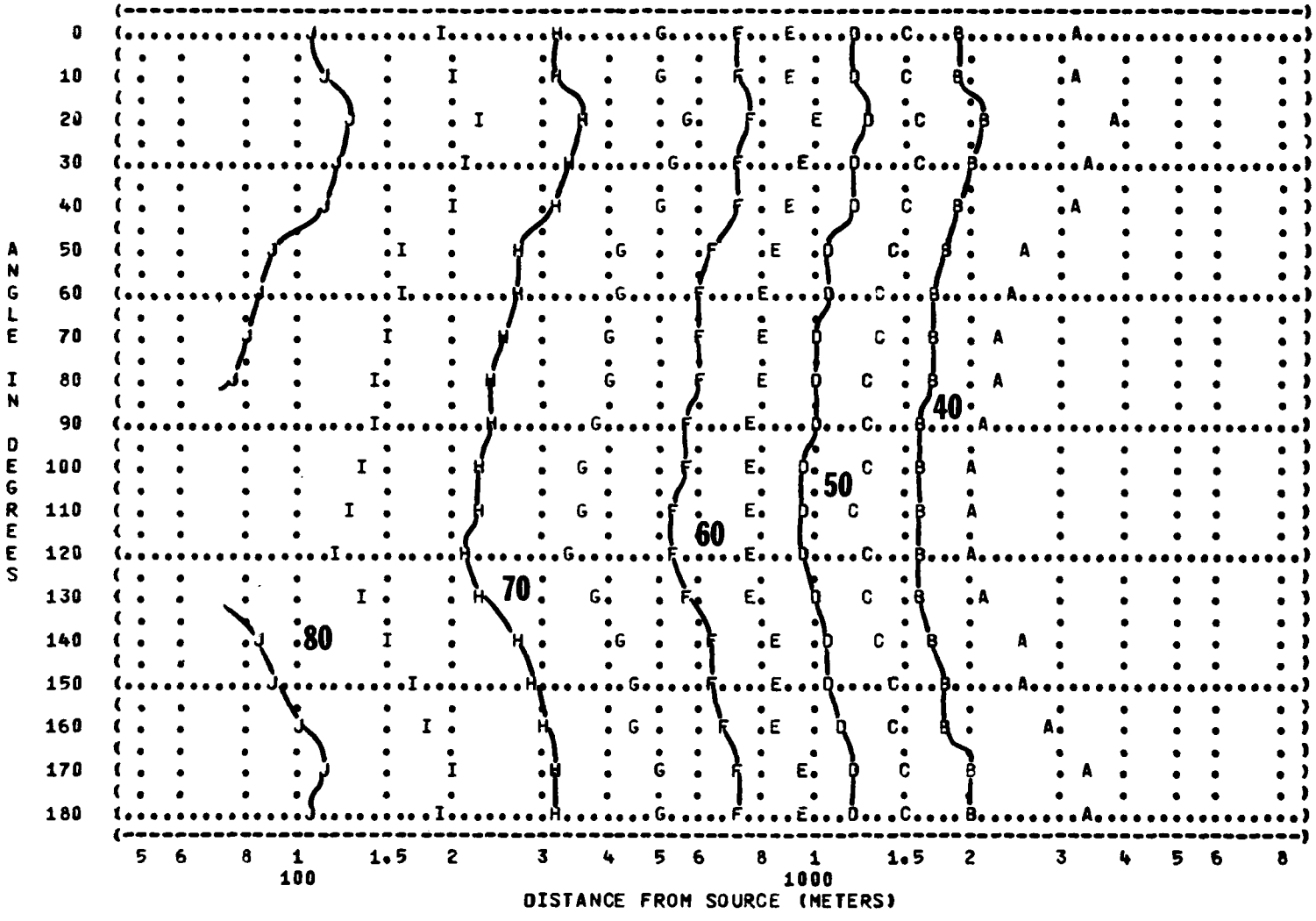


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 _N THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 20

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

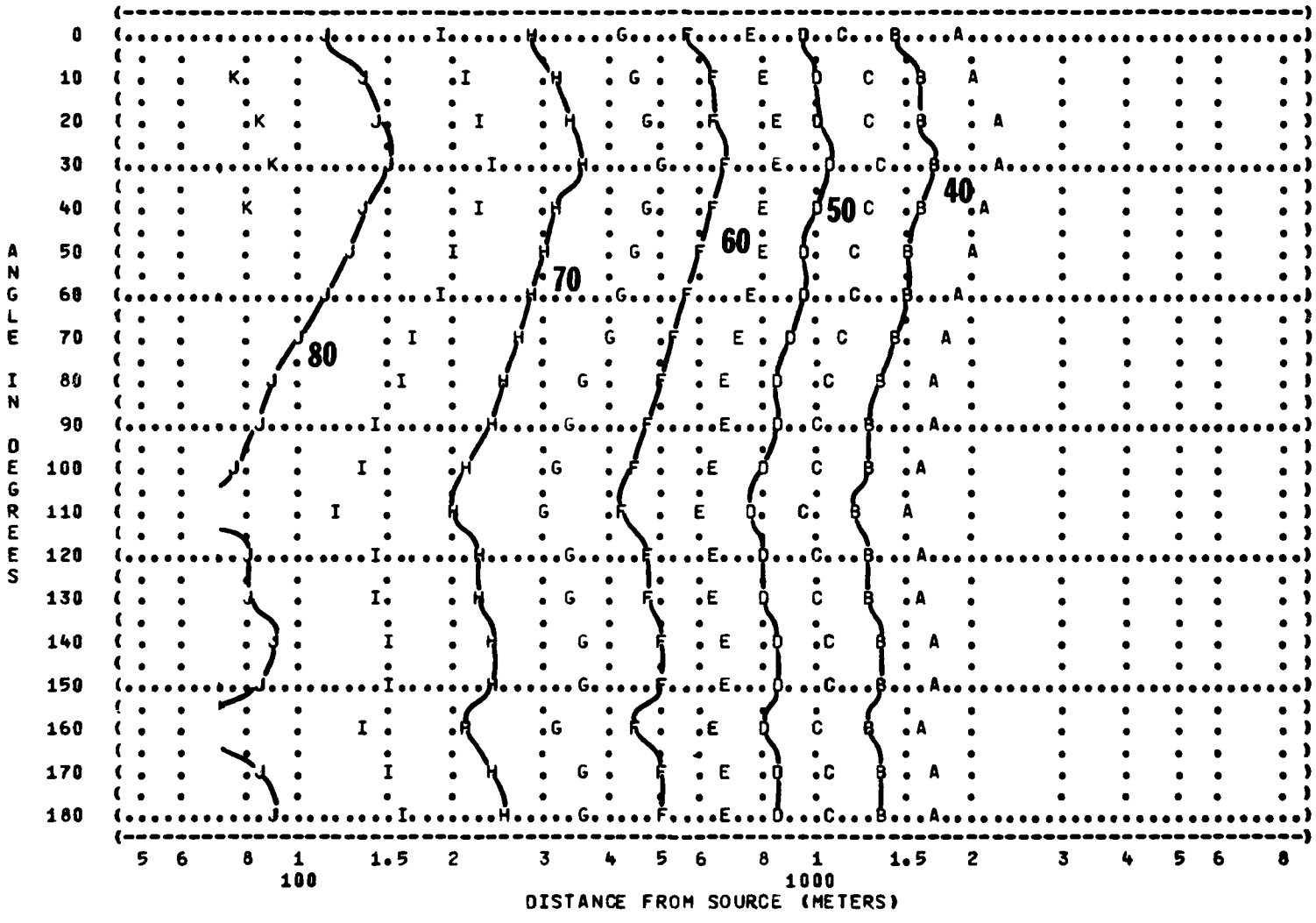


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 21

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

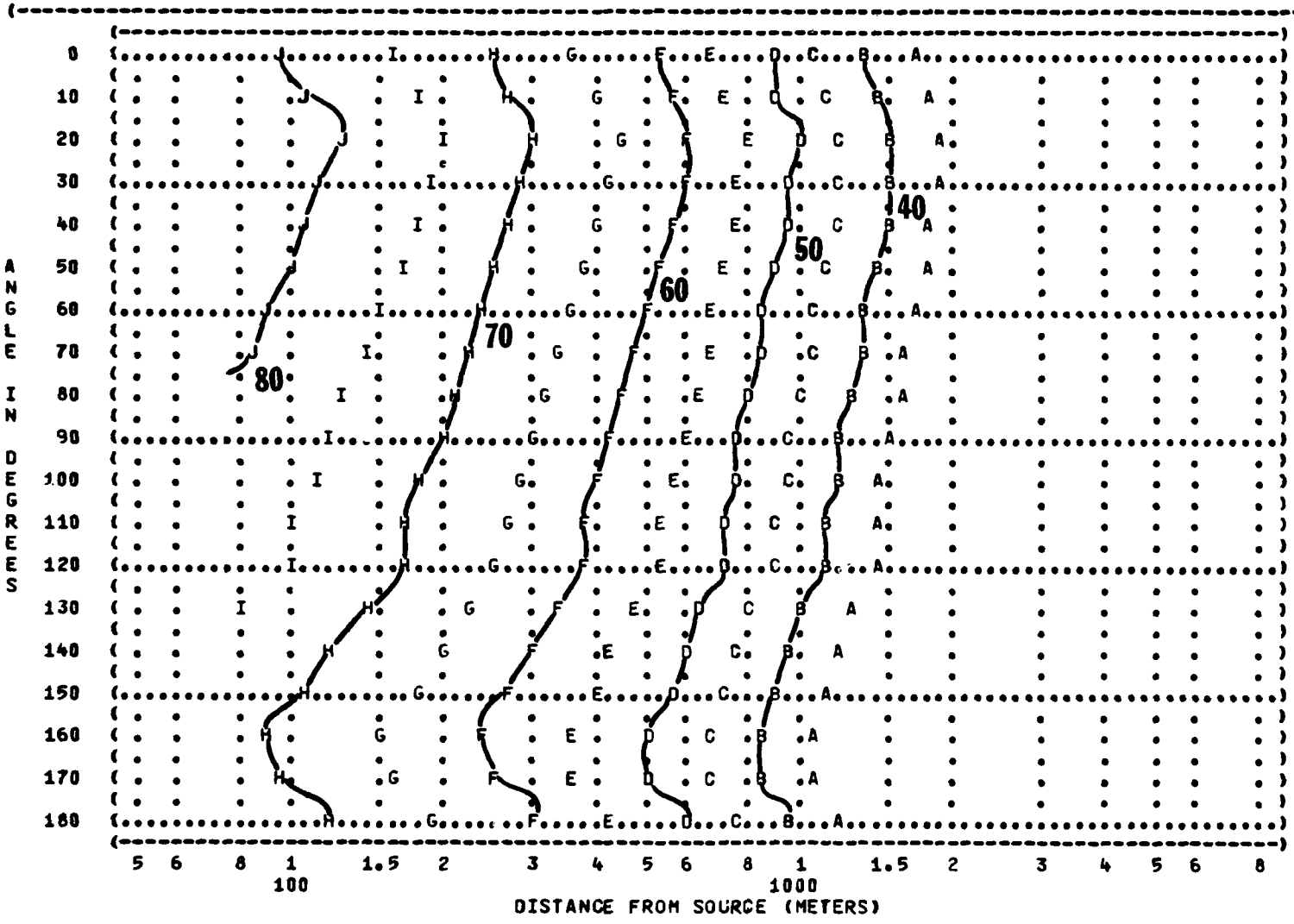


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 22

NOISE SOURCE/SUBJECT:
F-15 ON THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

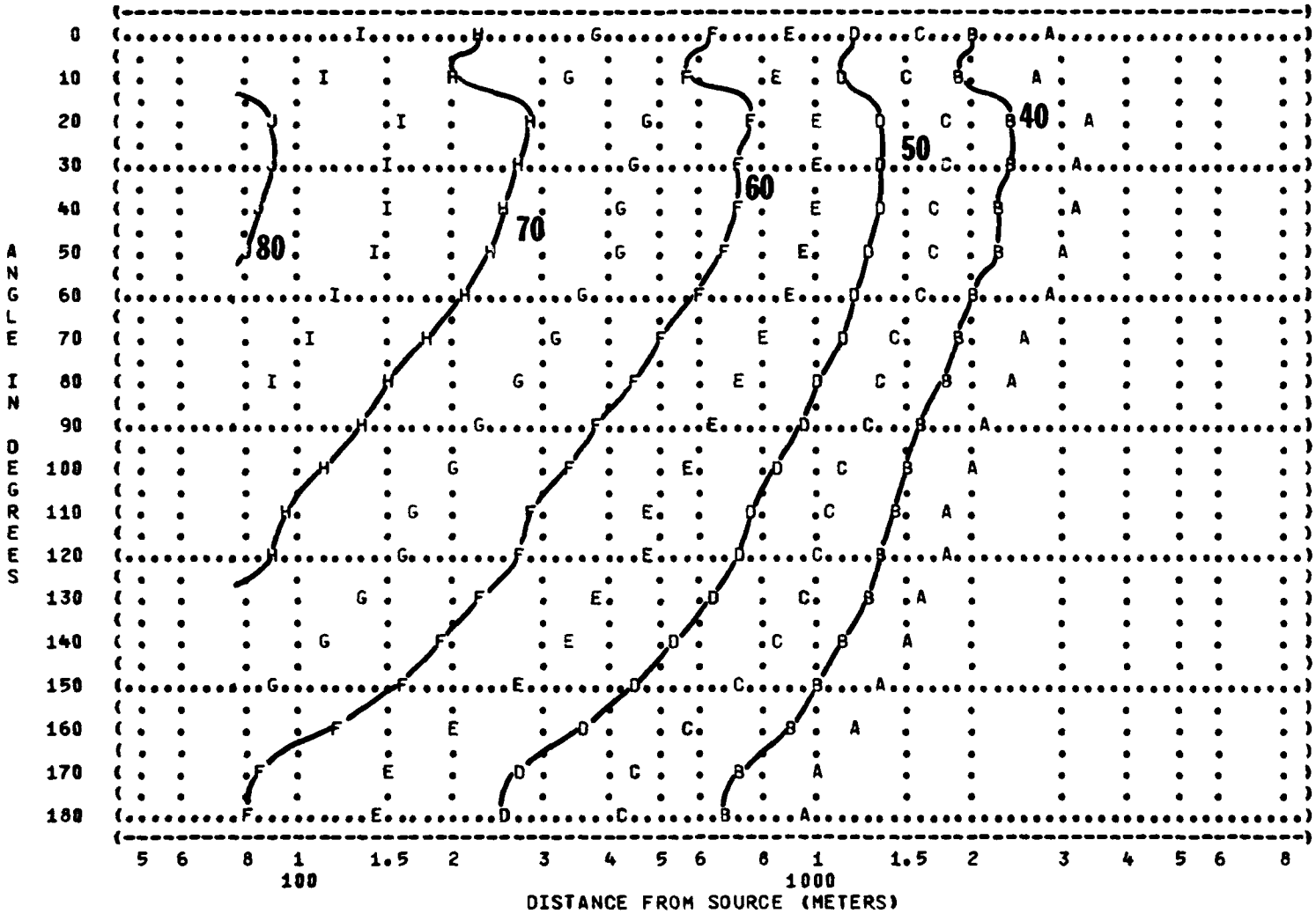


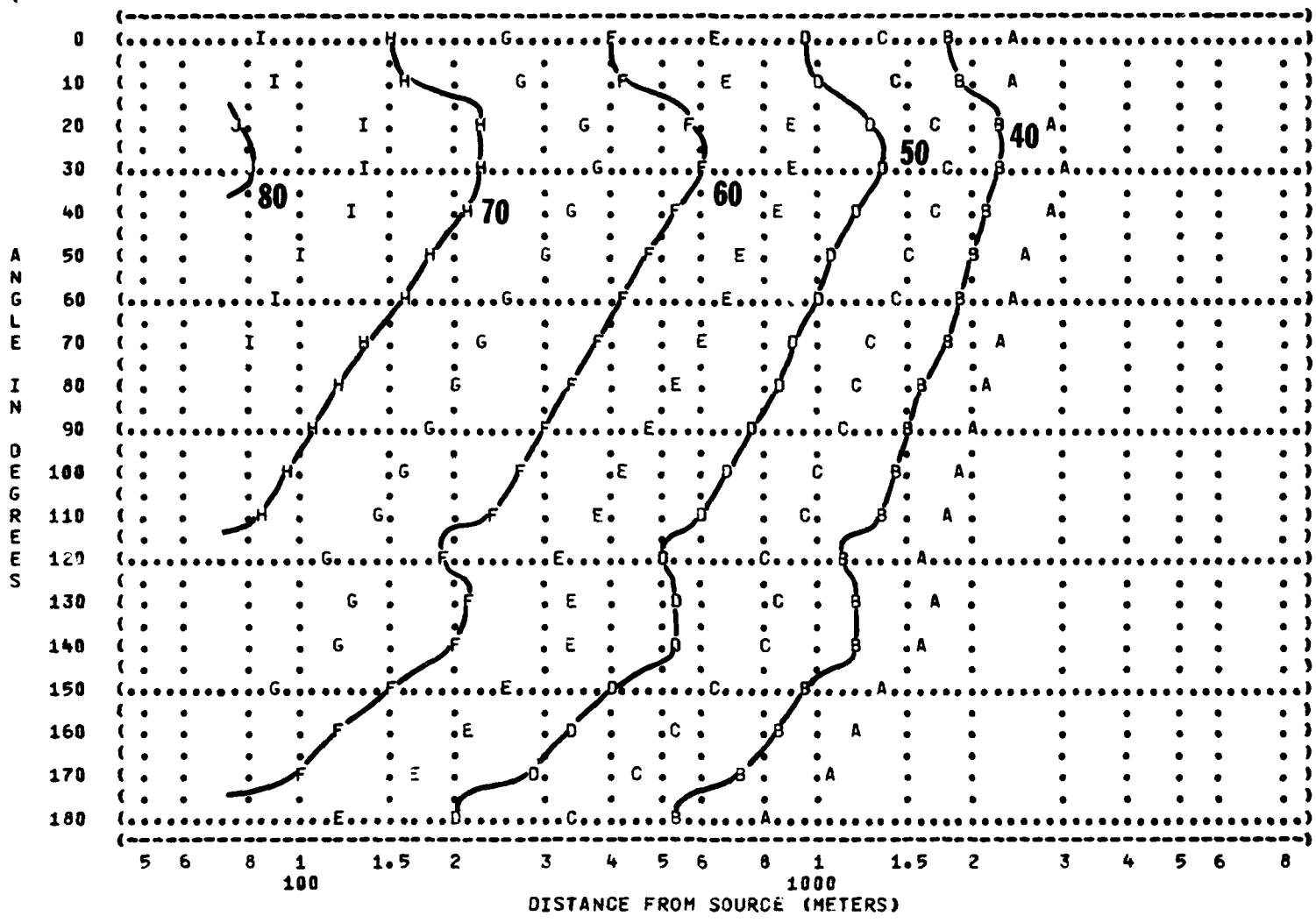
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 23



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 / TEST 79-761-001 / RUN 02 / 22 MAR 79 / PAGE 24

NOISE SOURCE/SUBJECT: F-15 ON THE AF32A-23 SUPPRESSOR 2 F100-PW-100 ENGINES FAR-FIELD NOISE

OPERATION: 80% RPM BOTH ENGINES GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

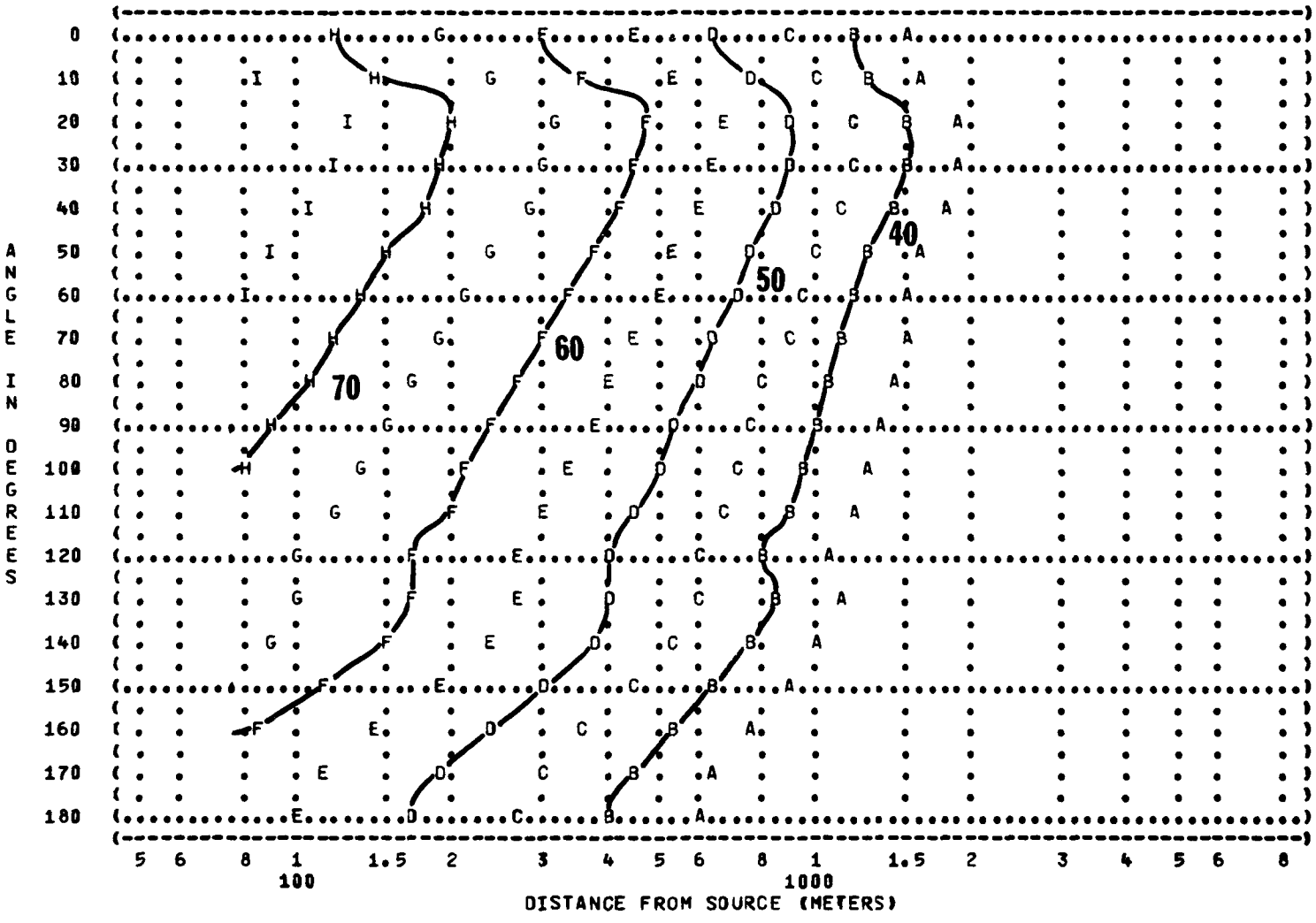


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 25

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

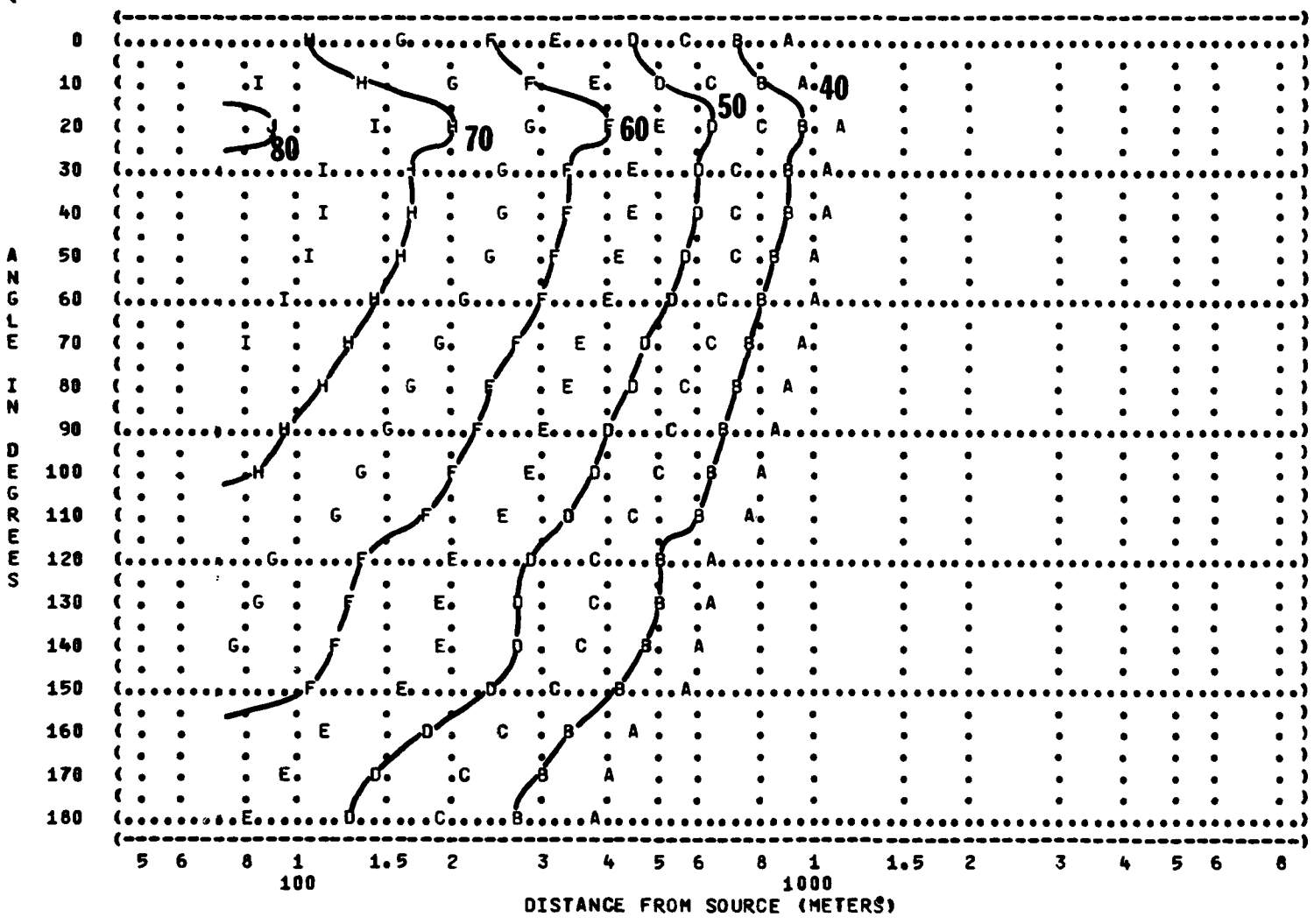


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
80% RPM
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 02
22 MAR 79
PAGE 26

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

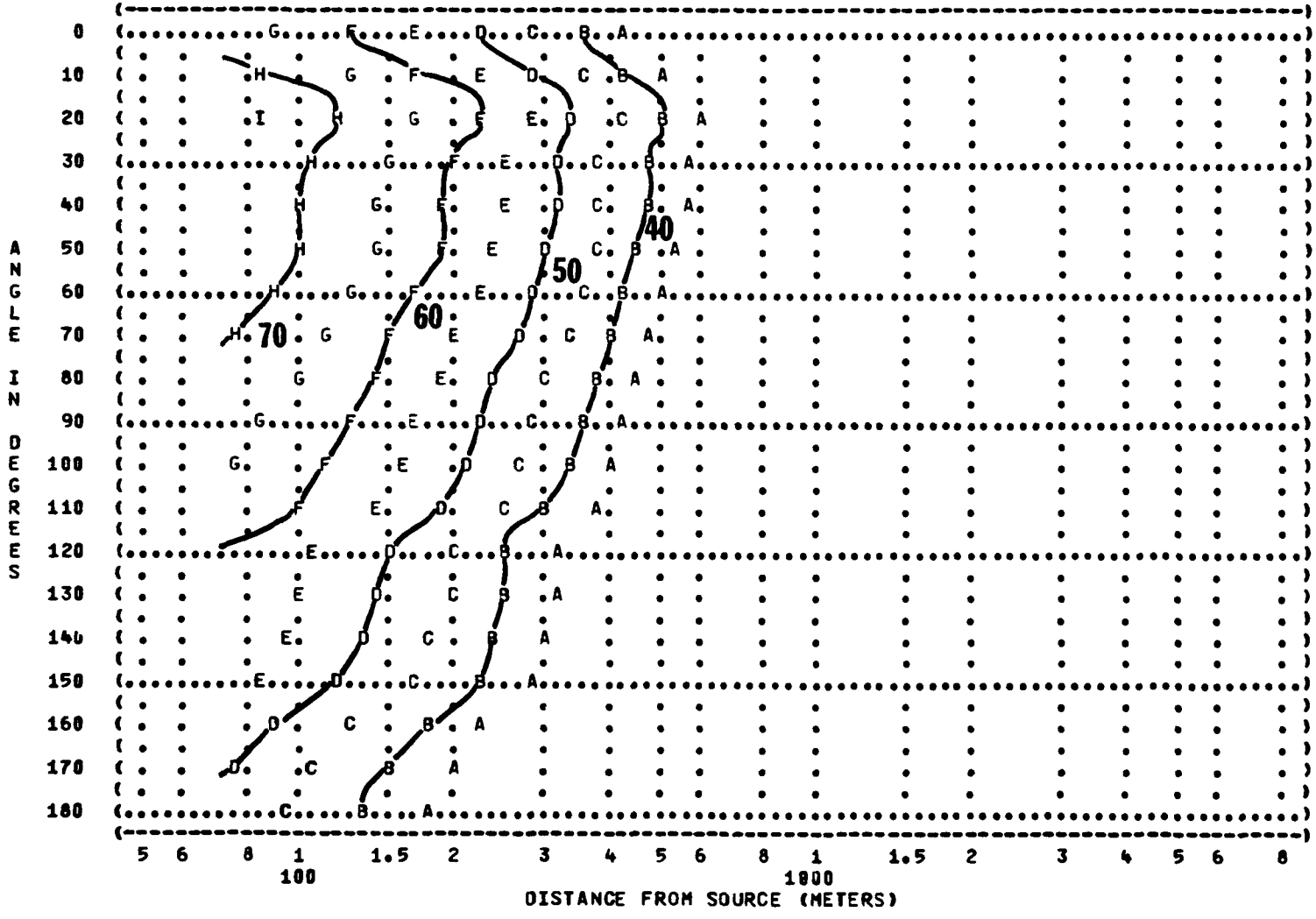


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 18

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90

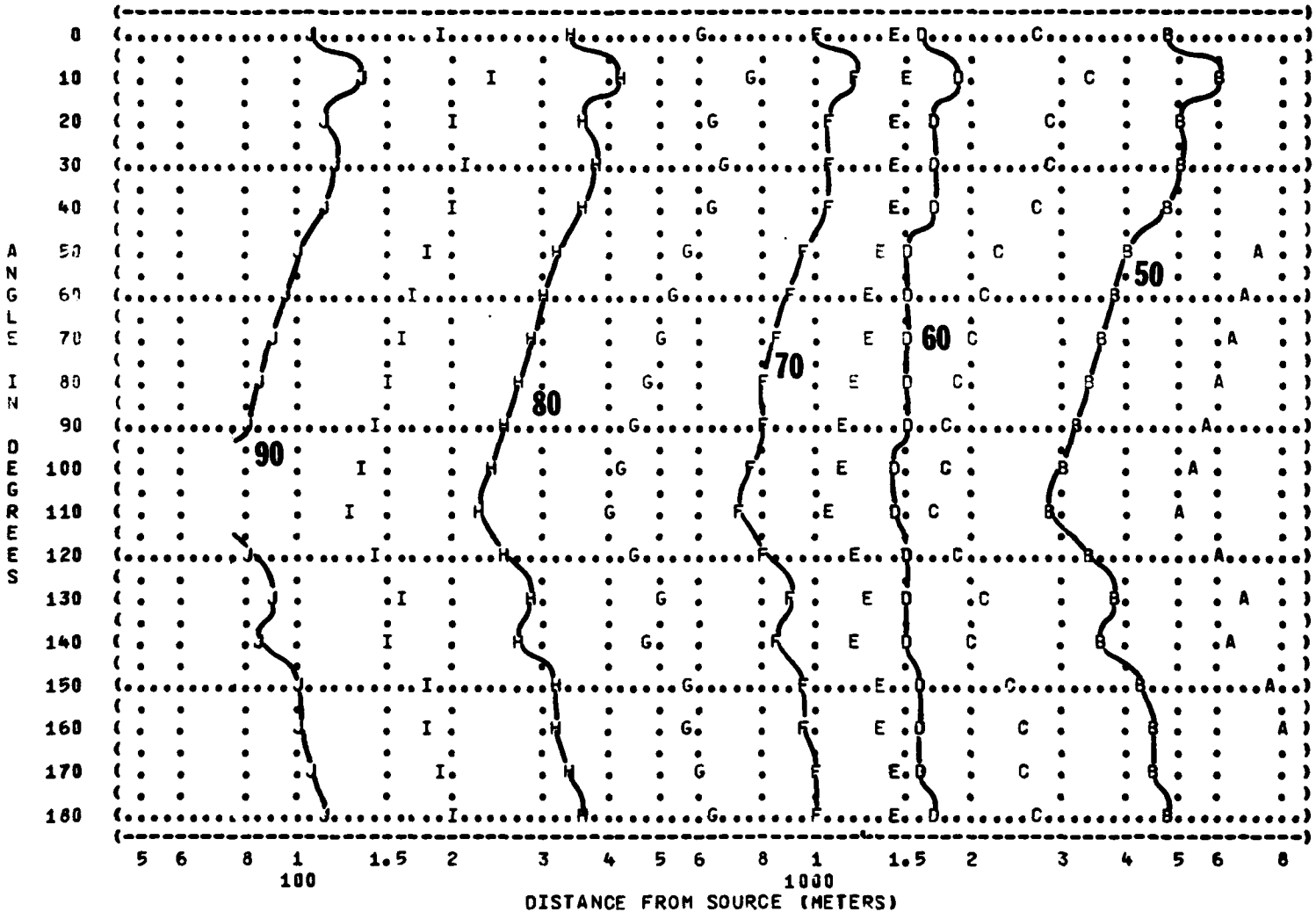


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 19

NOISE SOURCE/SUBJECT:
F-15 ON THE AFSEA-28 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 19 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

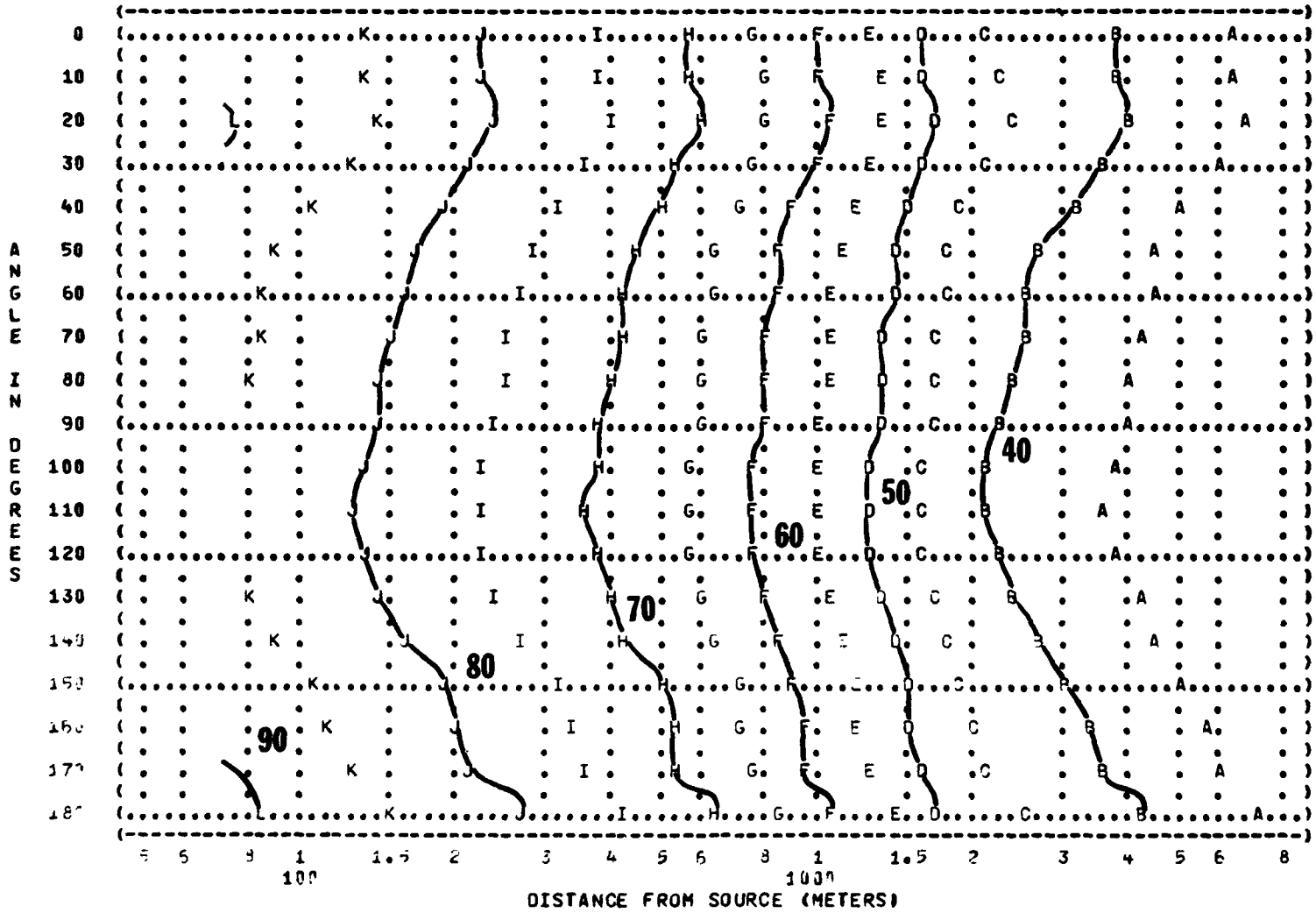


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 20

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

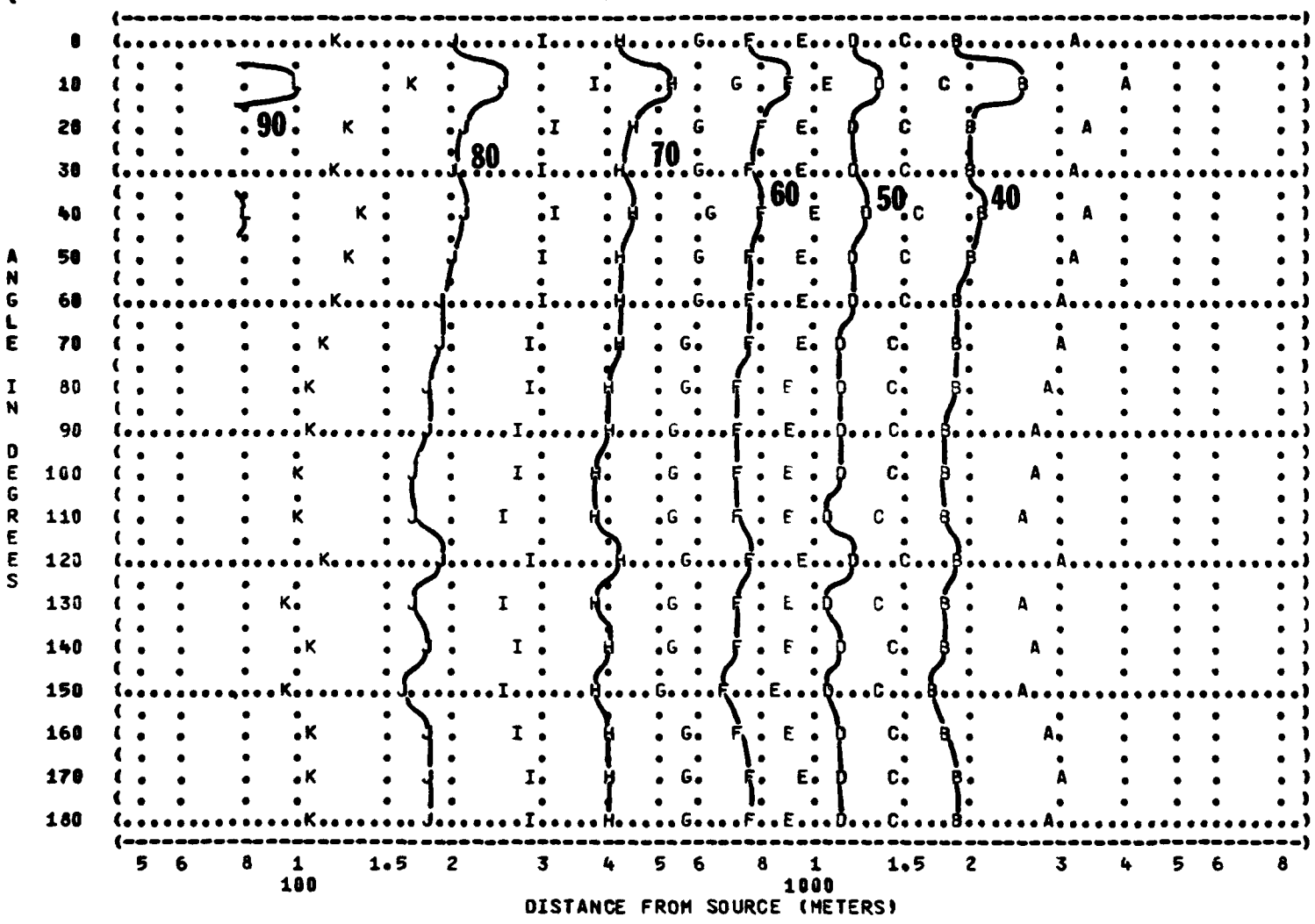


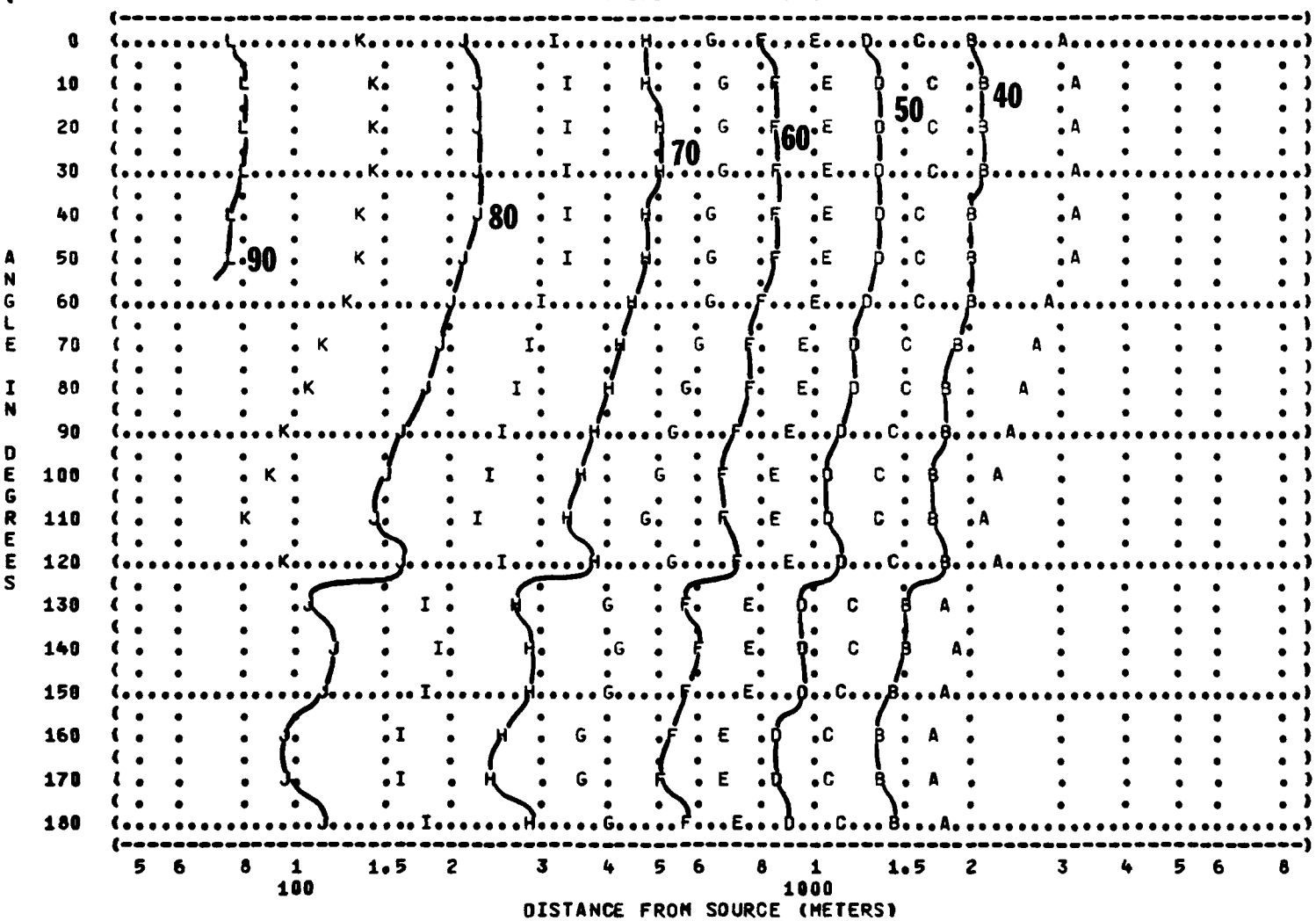
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 21

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE: 10

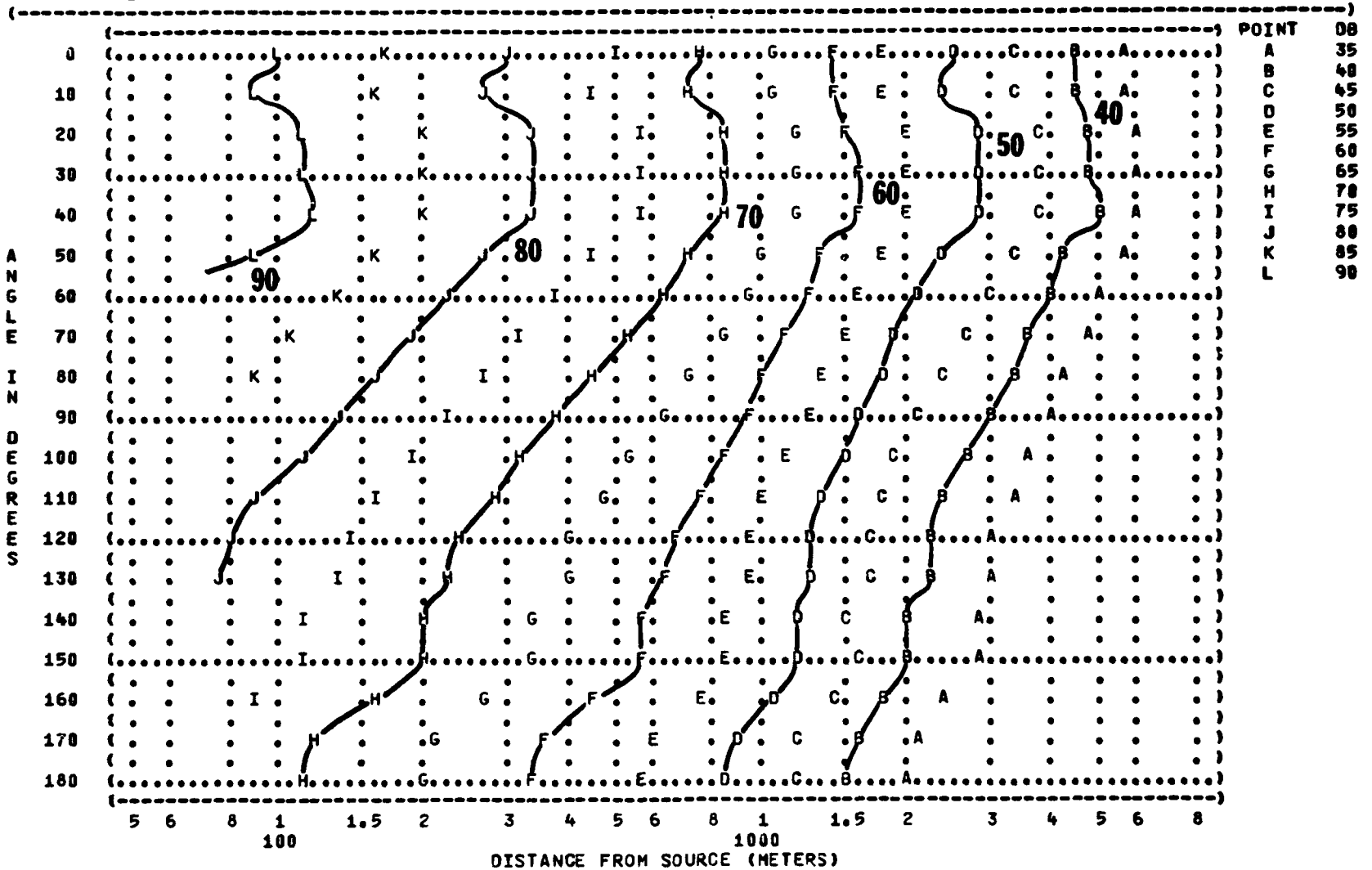
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 22



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

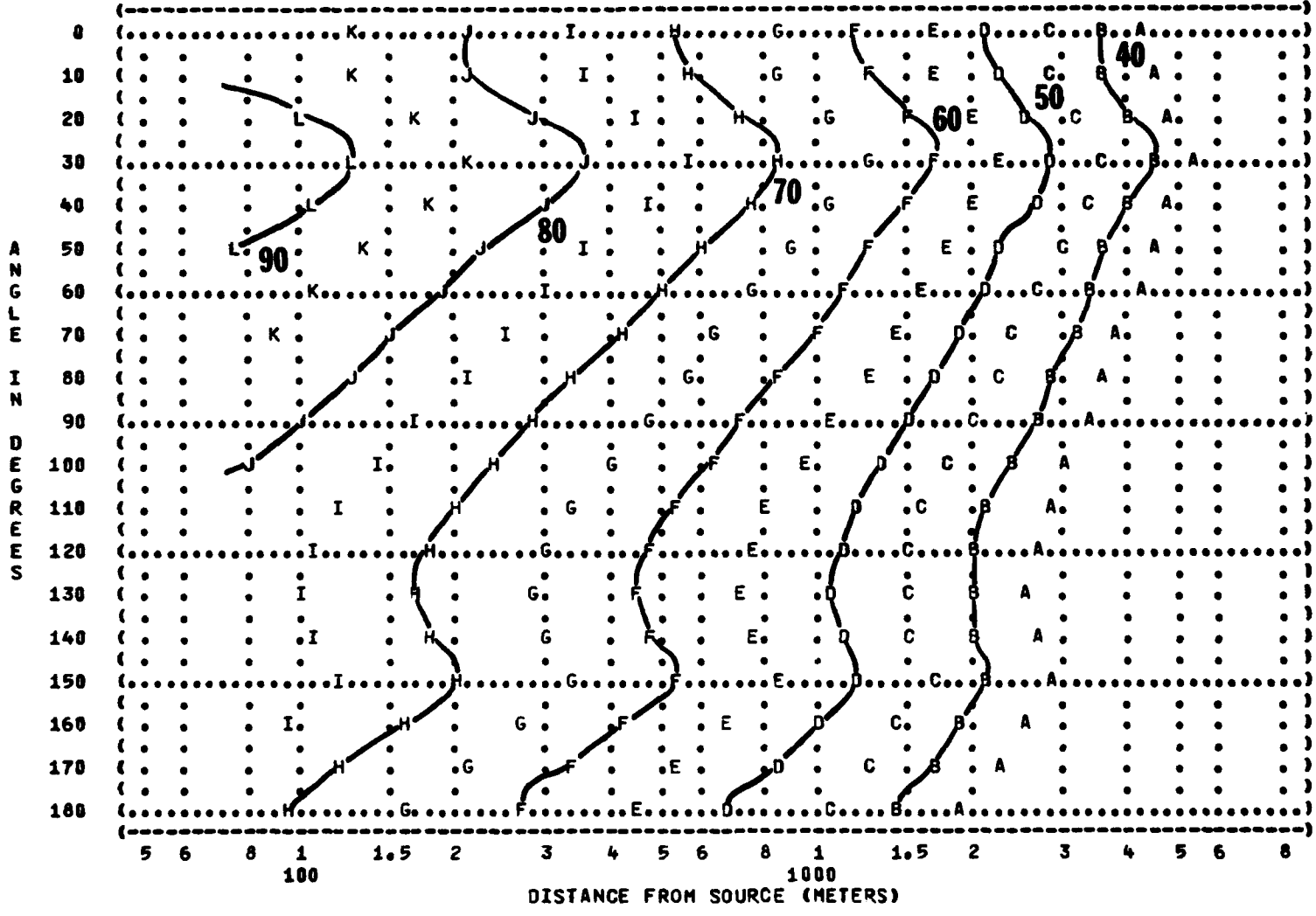
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 23

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRES = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 24

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

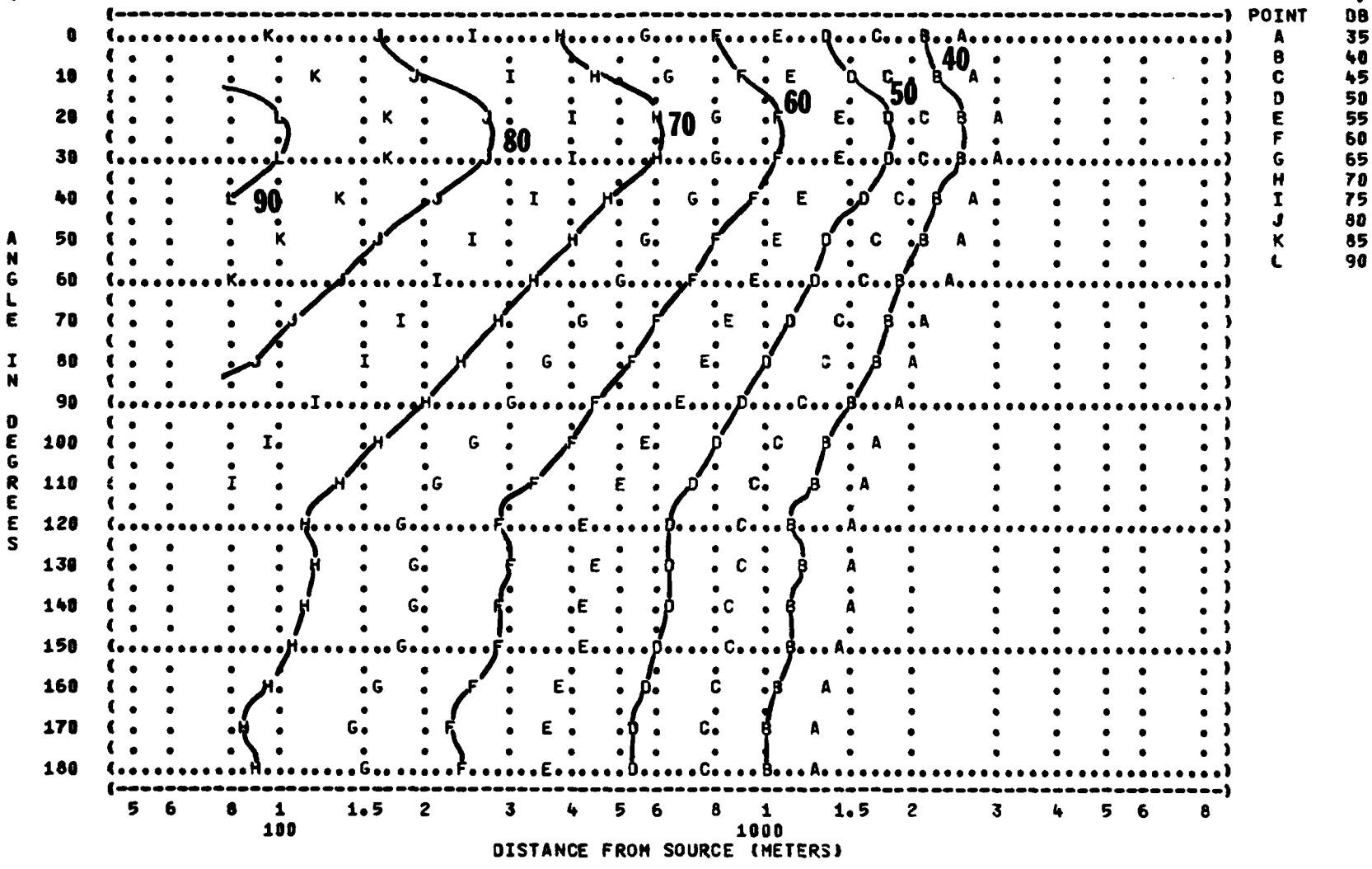


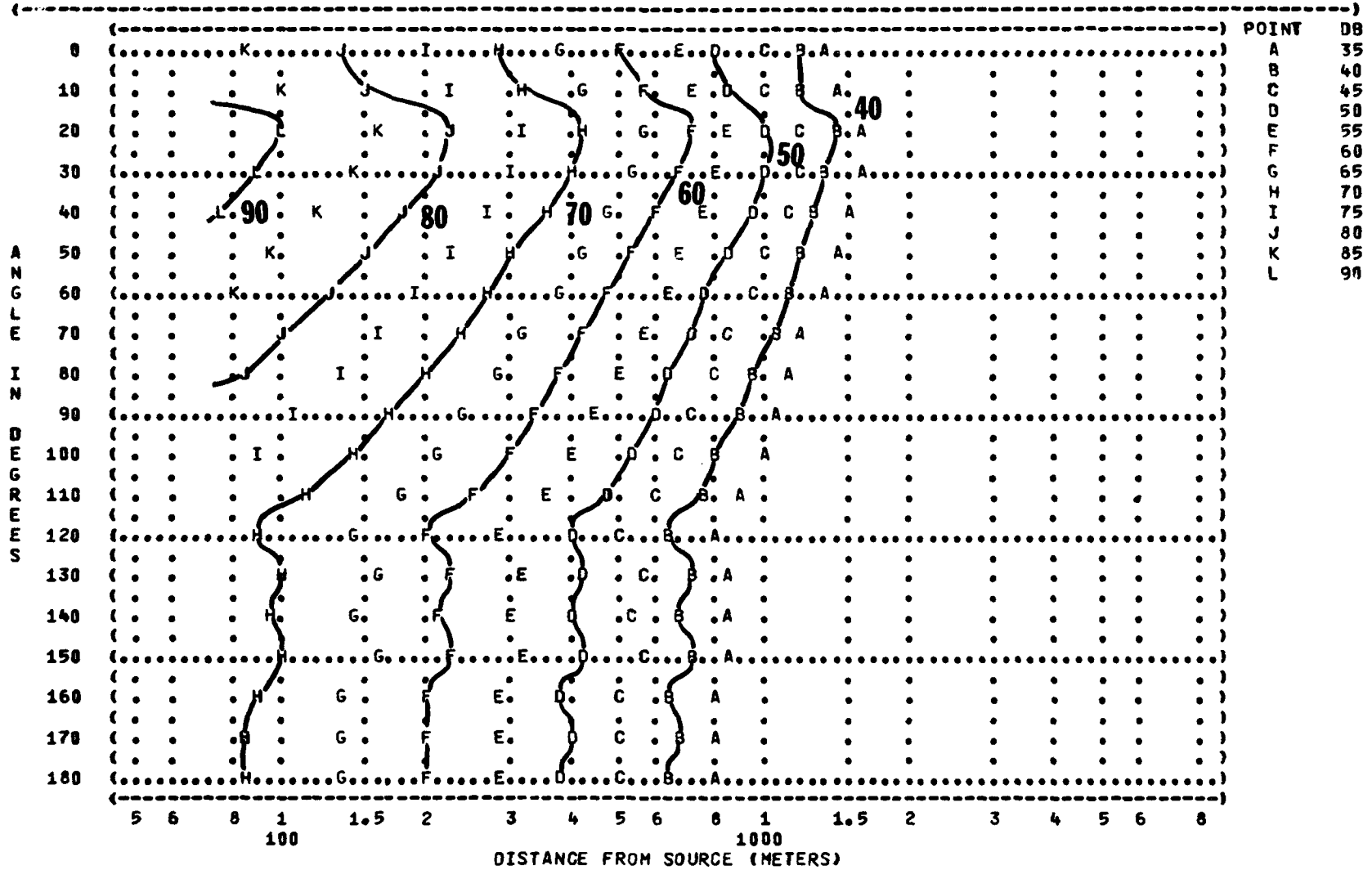
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-801
RUN 03
22 MAR 79
PAGE 25

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

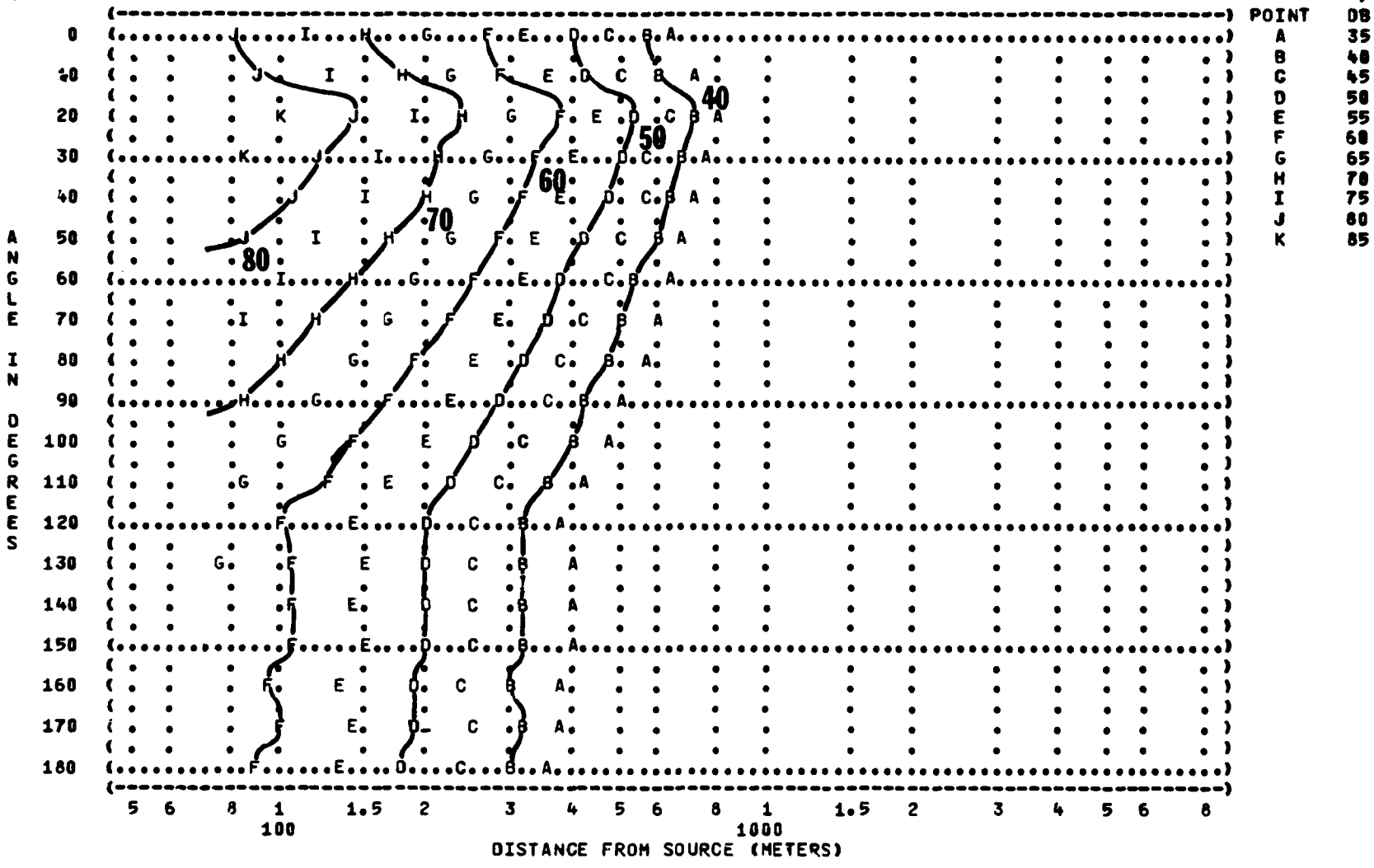
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
MILITARY POWER (91% RPM)
BOTH ENGINES
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 03
22 MAR 79
PAGE 26



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

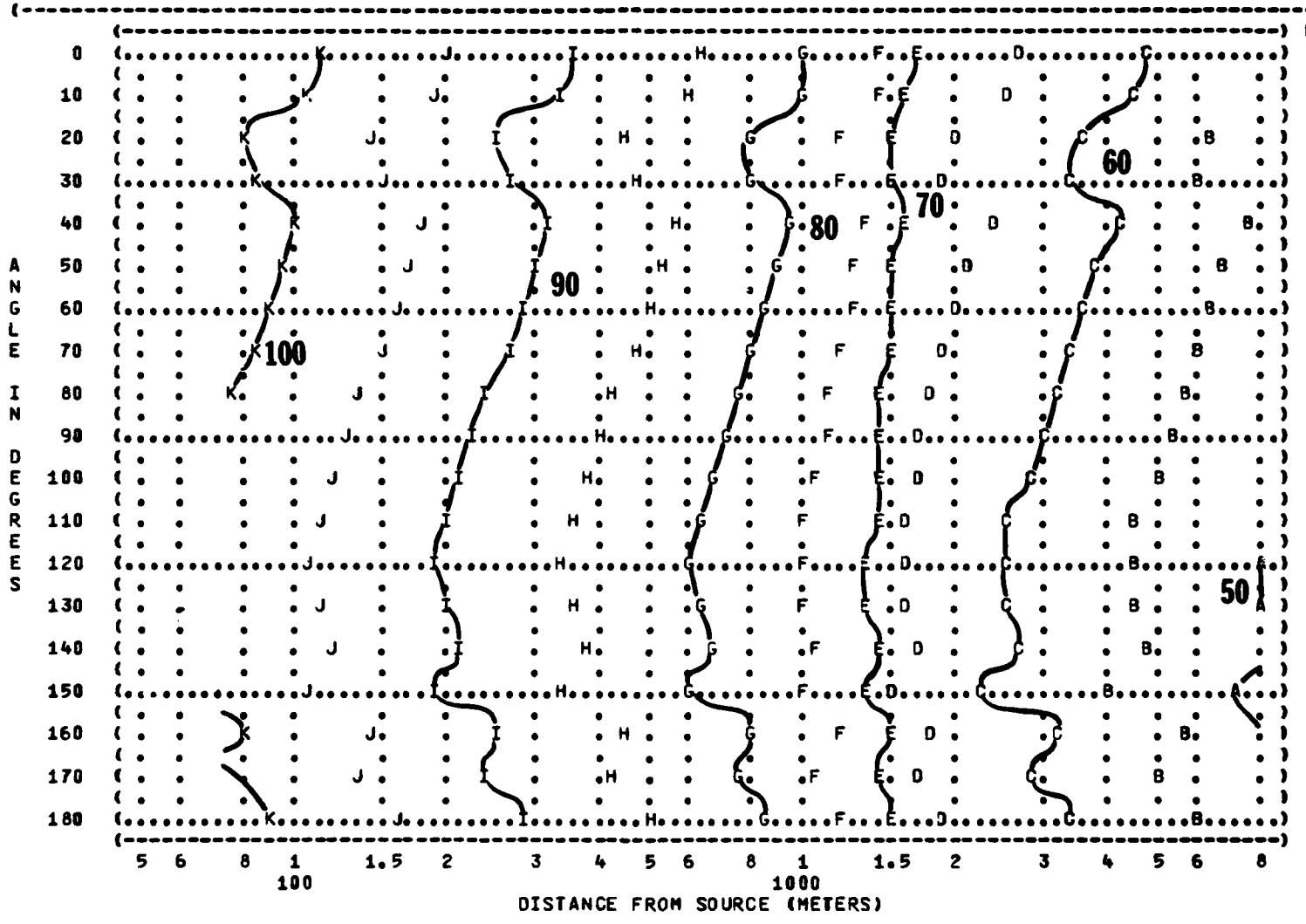
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: F-15 IN THE AF32A-23 SUPPRESSOR 2 F100-PW-100 ENGINES FAR-FIELD NOISE

OPERATION: AFTERBURNER POWER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4 TEST 79-761-081 RUN 04 22 MAR 79 PAGE 18



POINT	DB
A	50
B	55
C	60
D	65
E	70
F	75
G	80
H	85
I	90
J	95
K	100

FIGURE: 10

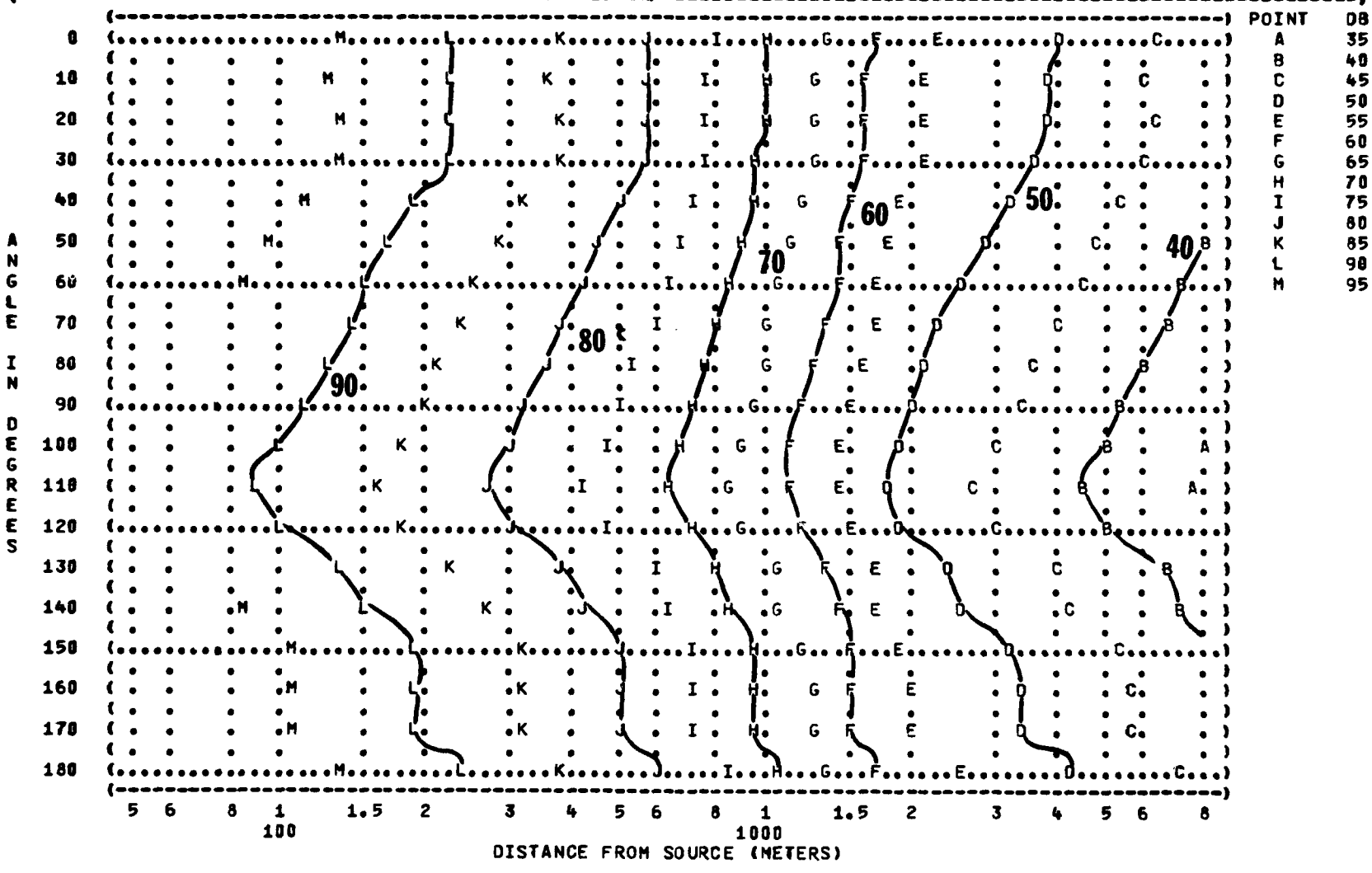
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 19

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 79-761-001 RUN 04 22 MAR 79 PAGE 20

NOISE SOURCE/SUBJECT: F-15 IN THE AF32A-23 SUPPRESSOR 2 F100-PW-100 ENGINES FAR-FIELD NOISE

OPERATION: AFTERBURNER POWER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

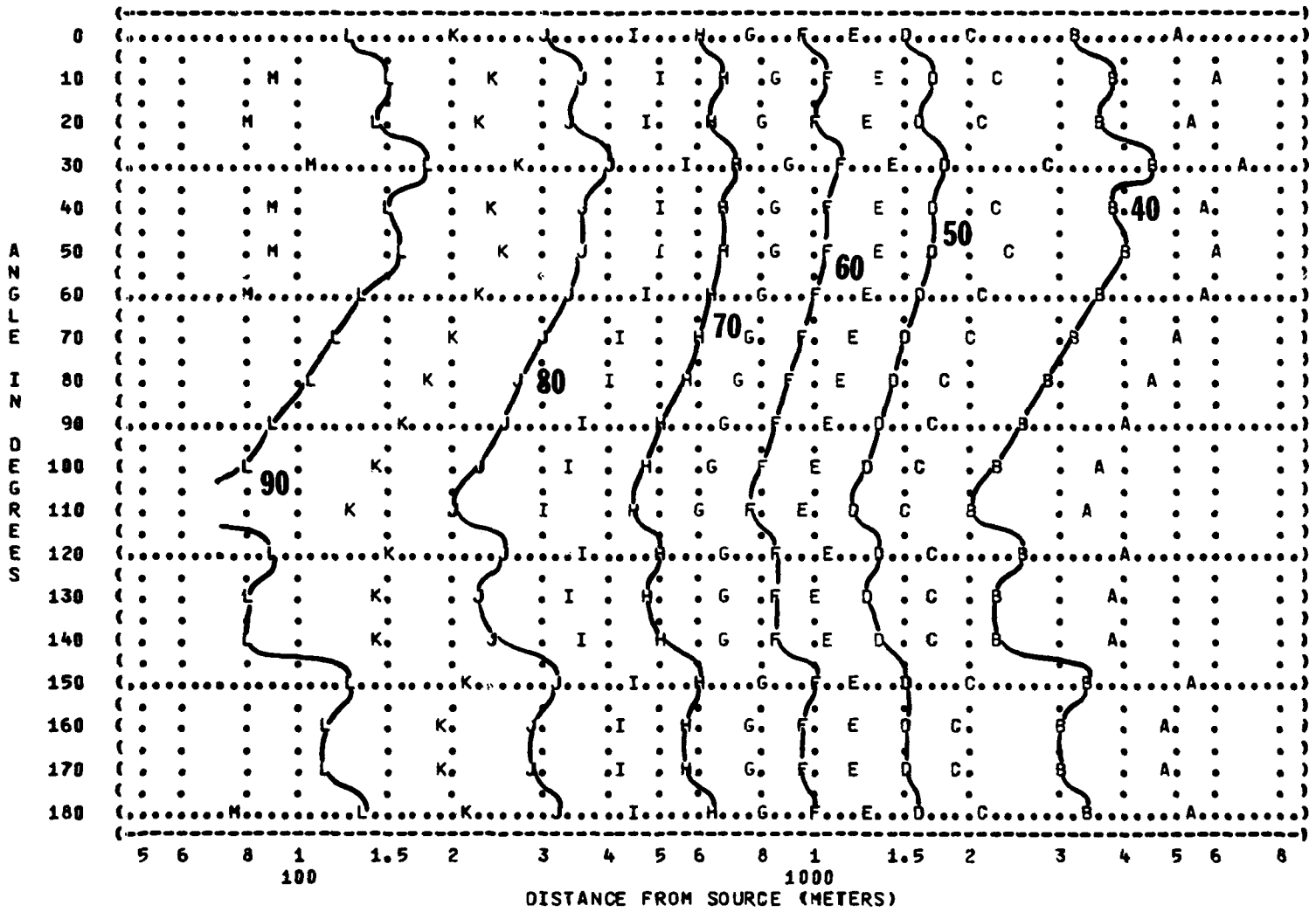


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 21

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95

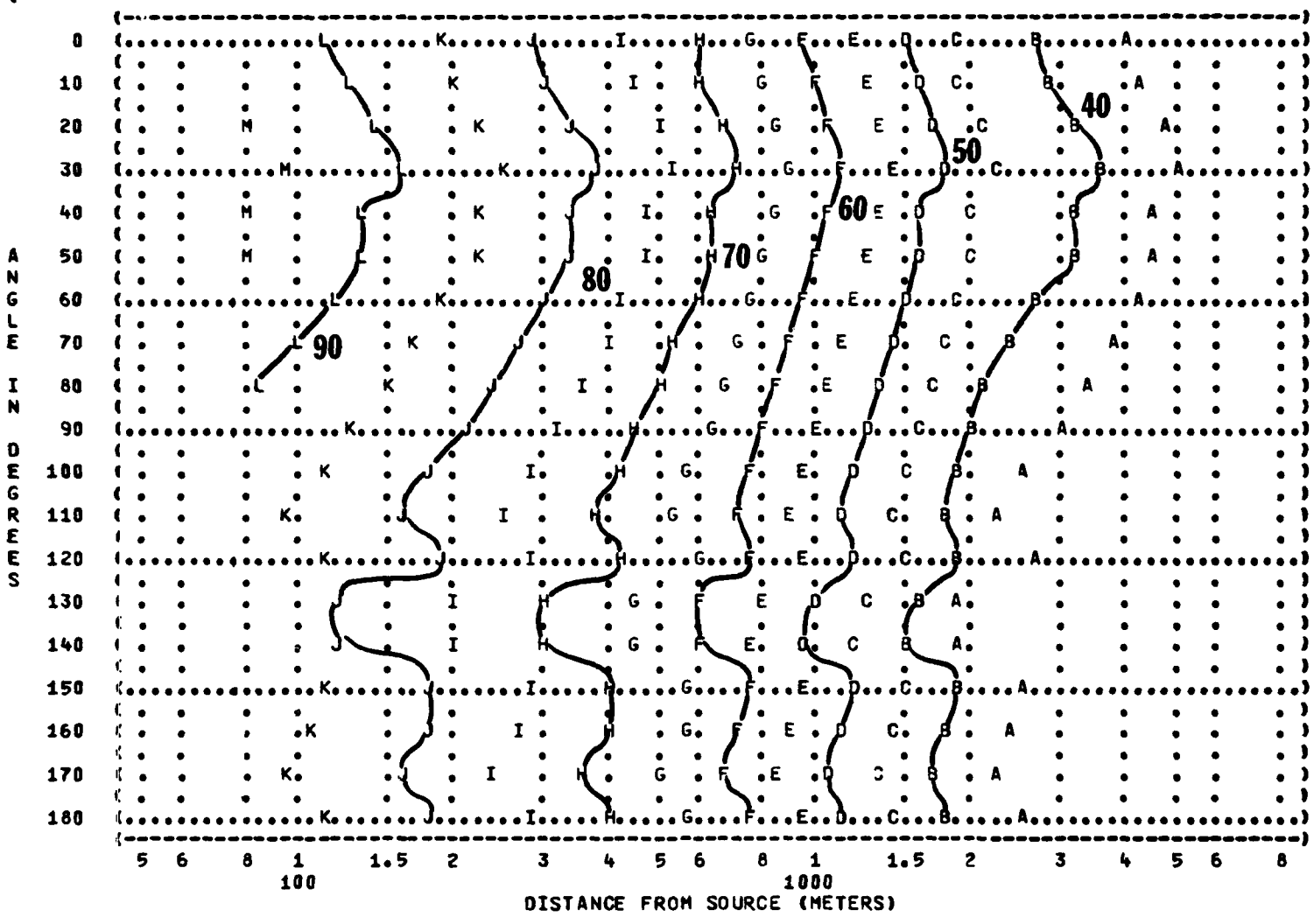


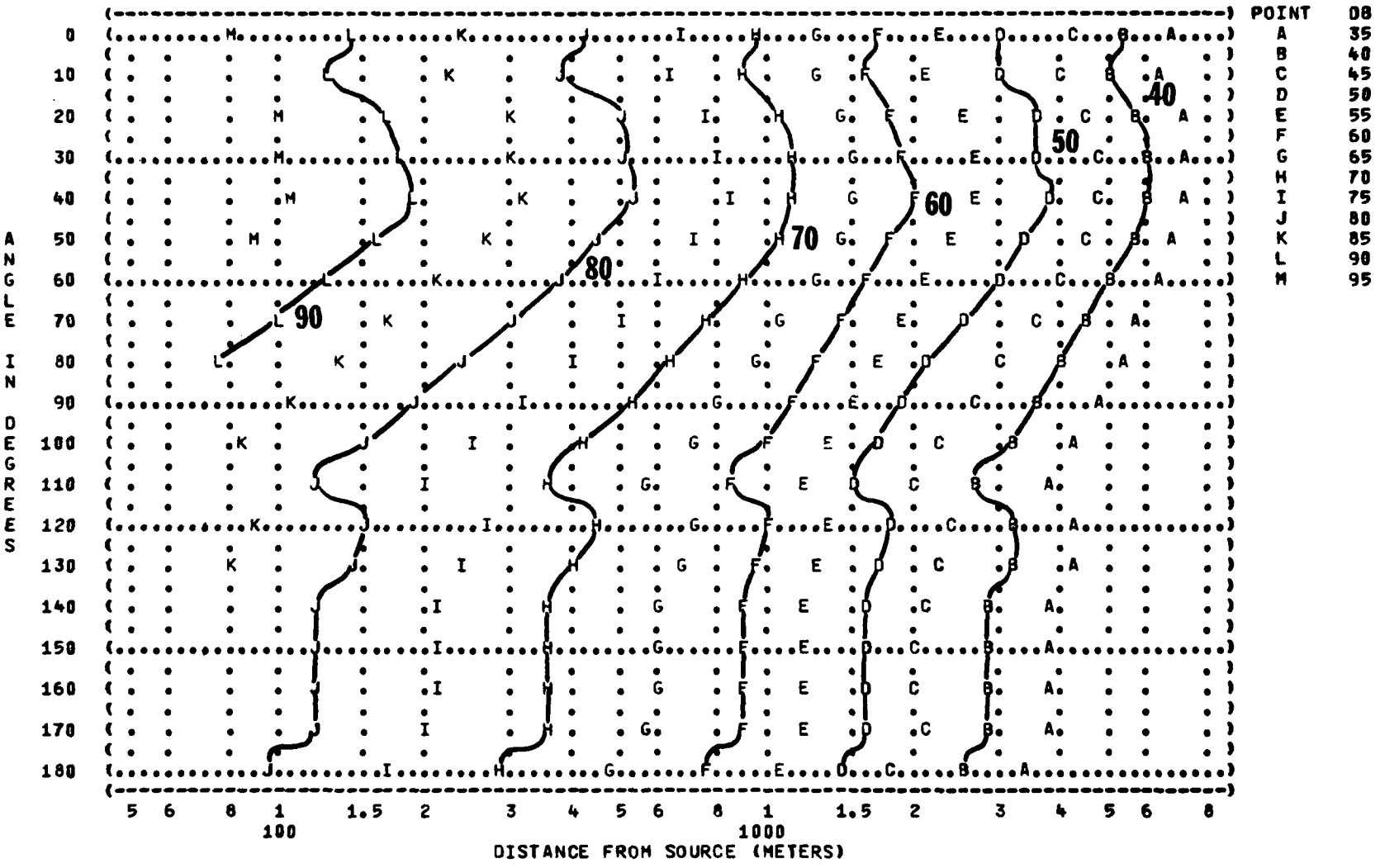
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 22



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95

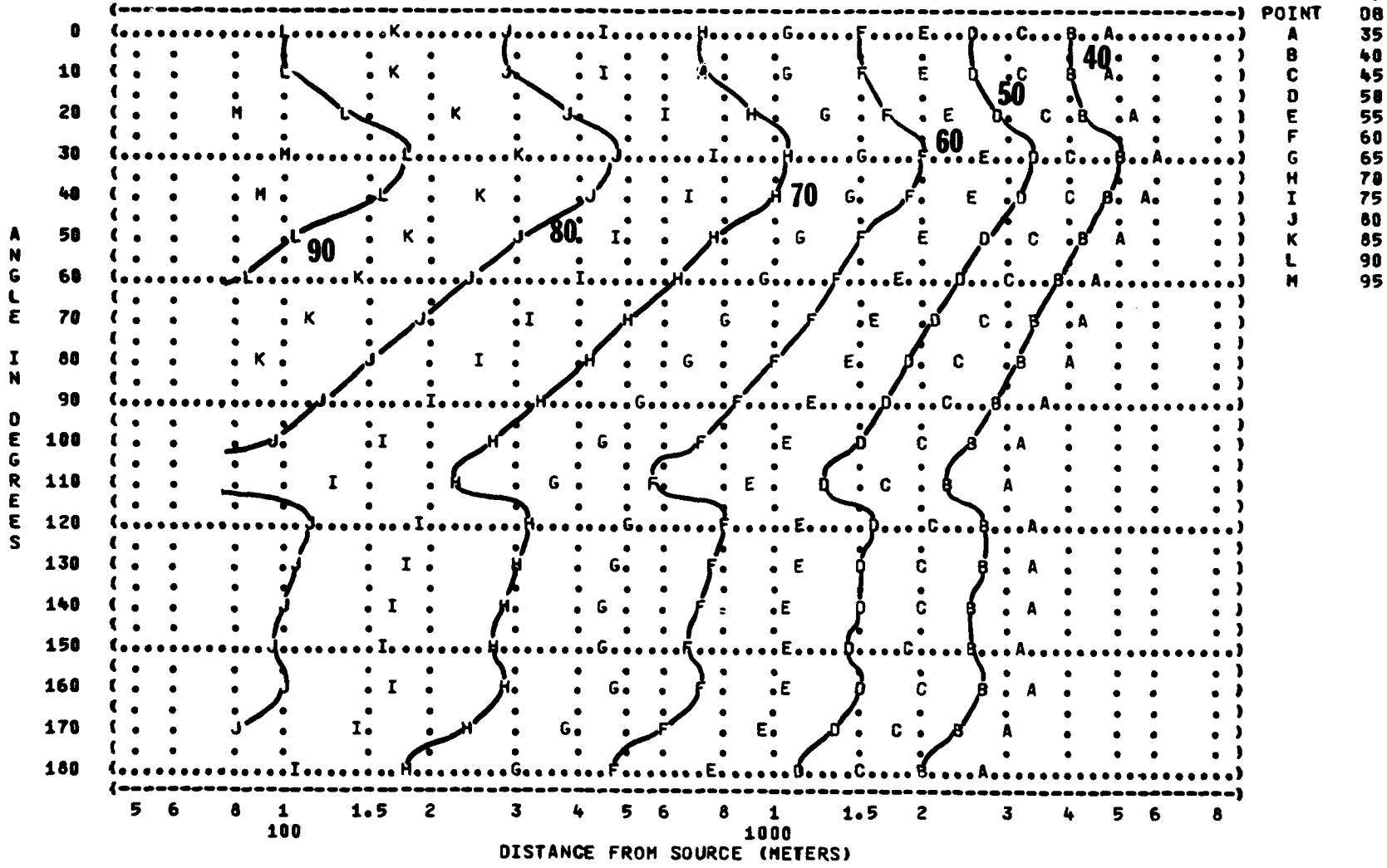
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04
22 MAR 79
PAGE 23



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90
M	95

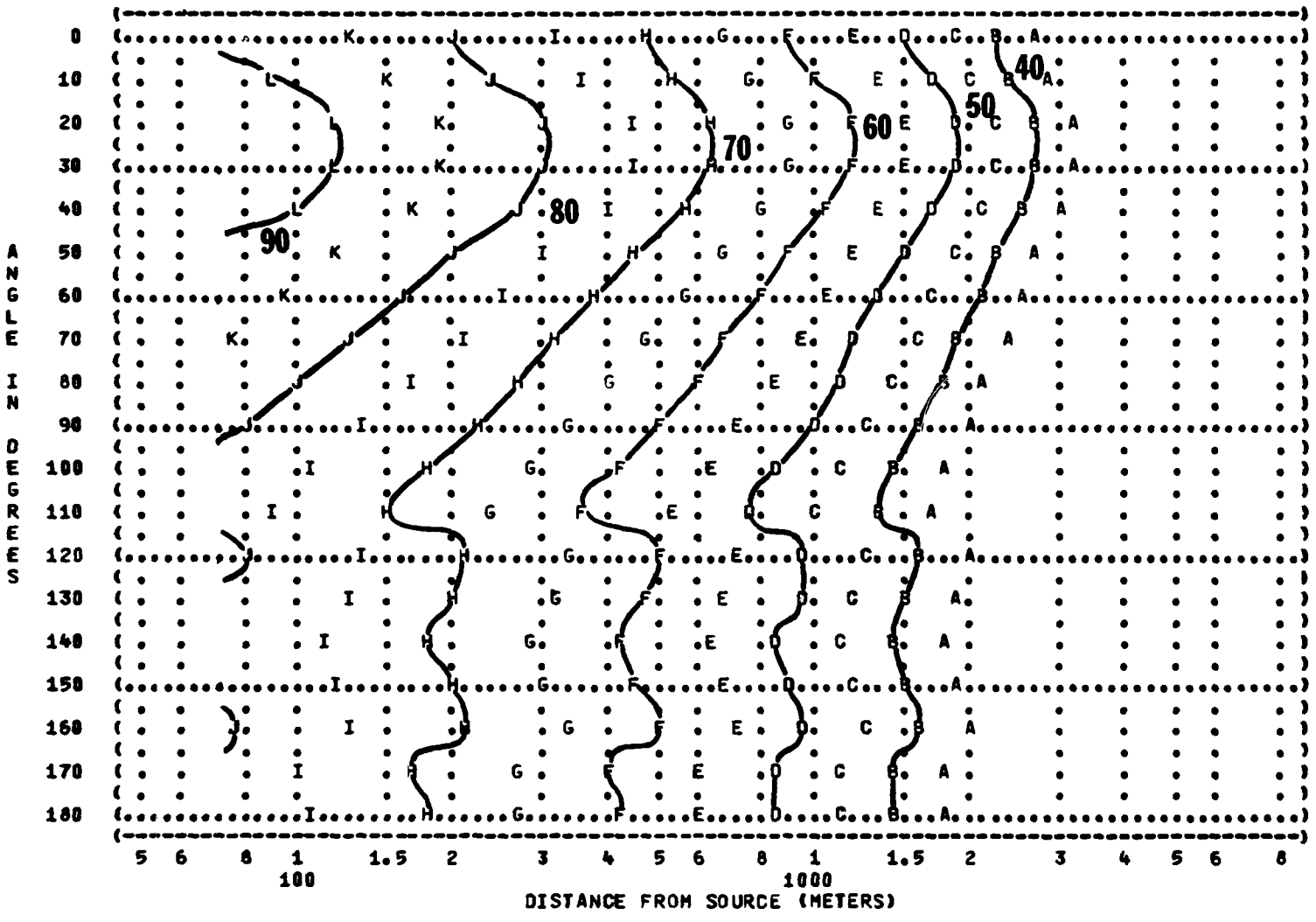
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 79-761-001 RUN 04 22 MAR 79 PAGE 24

NOISE SOURCE/SUBJECT: F-15 IN THE AF32A-23 SUPPRESSOR 2 F100-PW-100 ENGINES FAR-FIELD NOISE

OPERATION: AFTERBURNER POWER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

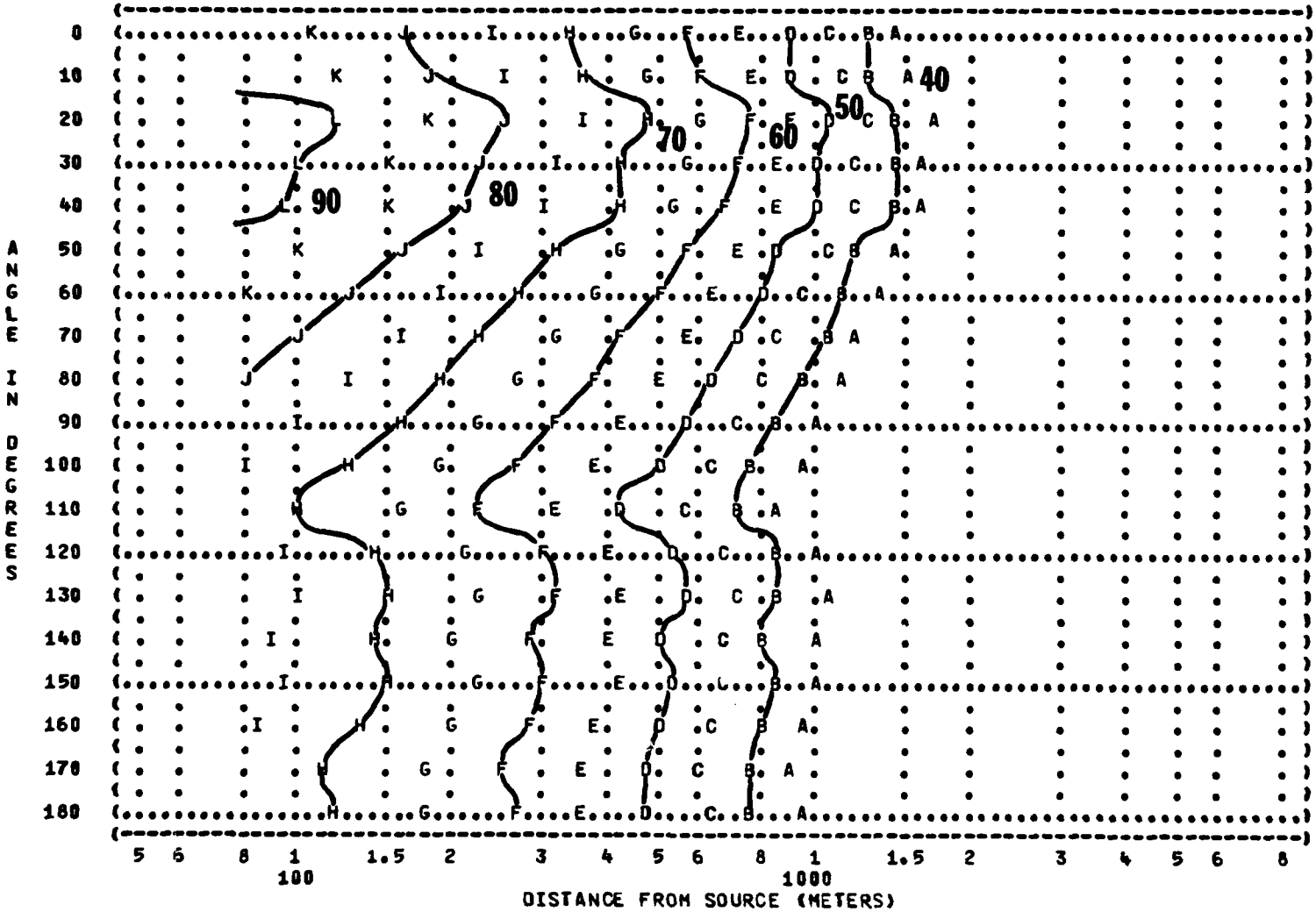
OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04

22 MAR 79

PAGE 25



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 79-761-001
RUN 04

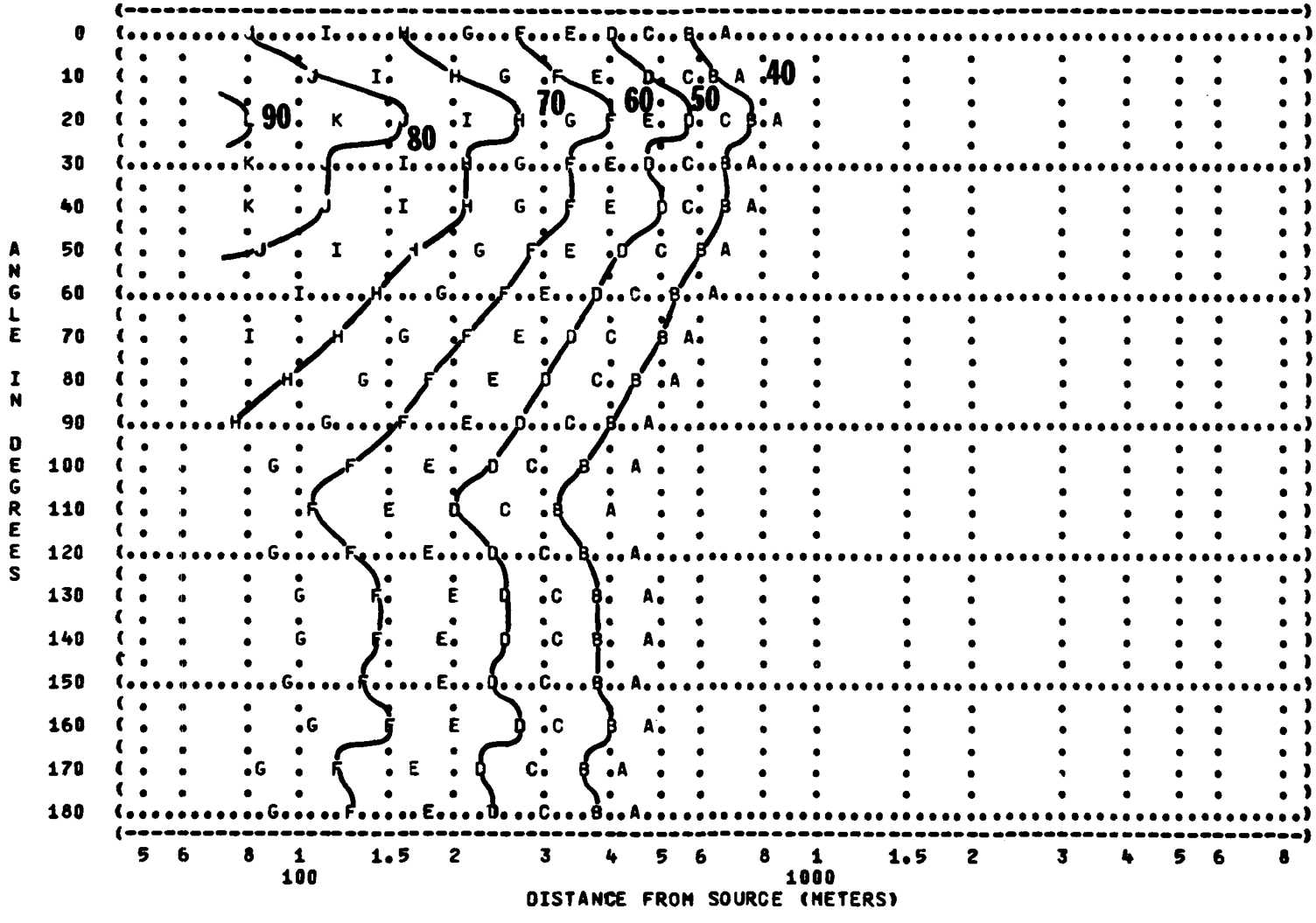
22 MAR 79

PAGE 26

NOISE SOURCE/SUBJECT:
F-15 IN THE
AF32A-23 SUPPRESSOR
2 F100-PW-100 ENGINES
FAR-FIELD NOISE

OPERATION:
AFTERBURNER POWER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

*U.S.Government Printing Office: 1979 — 657-084/350